

# PUGET SOUND WATER QUALITY WORK PLAN



SUBMITTED TO THE WASHINGTON STATE LEGISLATURE  
DECEMBER 20, 2002



Prepared by the  
**Puget Sound Action Team**  
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# PUGET SOUND WATER QUALITY ACTION TEAM

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The Action Team has 17 members: a city and a county representative; a representative of federally recognized tribes; ex-officio representatives of three federal agencies; the heads of 10 state agencies involved in carrying out the *Puget Sound Water Quality Management Plan* and a chair appointed by the Governor. The Action Team:

- Develops a biennial work plan and budget.
- Periodically amends the *Puget Sound Water Quality Management Plan*.

**Scott Redman**, Acting Chair

**Ken Berg**, Manager, U.S. Fish and Wildlife Service\*

**Martha Choe**, Director, Department of Community, Trade and Economic Development

**Tom Fitzsimmons**, Director, Department of Ecology

**Ron Kreizenbeck**, Deputy Regional Administrator, Environmental Protection Agency

**Laura E. Johnson**, Director, Interagency Committee for Outdoor Recreation

**Jeffrey Koenings**, Director, Department of Fish & Wildlife

**\*Bob Lohn**, Regional Administrator, National Marine Fisheries Service

**Dan McShane**, (Representing county government) Whatcom County Council

- Coordinates the monitoring and research programs.

- Coordinates implementation of the *Puget Sound Water Quality Management Plan*.

**Valoria Loveland**, Director, Department of Agriculture

**Doug MacDonald**, Secretary, Department of Transportation

**Francea McNair**, Aquatics Steward, Department of Natural Resources

**Mark Clark**, Executive Director, Washington State Conservation Commission

**Rex Derr**, Director, Parks and Recreation Commission

**Mary Selecky**, Secretary, Department of Health

**Daryl Williams**, Director, Department of the Environment, Tulalip Tribes

**Joan McGilton**, (Representing city government) Burien City Council

\* Non-voting member

## PUGET SOUND COUNCIL

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The Council has 12 members: seven appointed by the governor and four legislators. The Chair of the Action Team also chairs the Council. The Council:

- Advises the Action Team on work plan projects and activities, and on coordination with other state and local activities.
- Reviews progress on implementation of the work plan.

**Scott Redman**  
Acting Chair

**Jackie Aitchison** (Representing city government)  
Poulsbo City Council

**Kirk Anderson** (Representing business)  
Fisher Communications, Inc.

**Bill Dewey** (Representing the shellfish industry)  
Taylor Shellfish Co., Inc.

**Senator Tracey Eide\*** (D-Federal Way)  
Washington State Senate

**Rhea Miller** (Representing county government)  
San Juan County Commissioner

- Recommends changes to the *Puget Sound Water Quality Management Plan*, as needed.

- Tracks the progress of state agencies and local governments in implementing the work plan.

**Tom Putnam** (Representing the environmental community)  
Puget Soundkeeper Alliance

**Senator Pam Roach\*** (R-Auburn)  
Washington State Senate

**Representative Phil Rockefeller\*** (D-Kitsap County)  
Washington State House of Representatives

**Representative Mark Schoesler\*** (R-Ritzville)  
Washington State House of Representatives

**Jerry Van der Veen** (Representing agriculture)  
Van der Veen Dairy

**Frances Wilshusen** (Representing tribal governments)  
Northwest Indian Fisheries Commission

\* Non-voting member



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December 18, 2002

To: Legislators of the State of Washington

On behalf of the Puget Sound Action Team and the Puget Sound Council, I am pleased to present the *2003-2005 Puget Sound Water Quality Work Plan* for your consideration. This plan proposes a two-year work program for the Action Team member agencies, two university programs, and the Action Team support staff to protect and restore Puget Sound, with special attention to the following priority issues:

- Salmon, ground fish, forage fish, and other species at risk
- Marine and freshwater habitat
- Shellfish protection
- Stormwater
- On-site sewage systems
- Aquatic nuisance species
- Monitoring
- Education

For each of these issues, the work plan identifies long-term and biennial outcome measures, which the Action Team and Council will use to evaluate progress toward our goals for Puget Sound.

The Action Team and Council have prepared this document in hopes that it might help you to develop a budget for the 2003-2005 biennium. As you confront the state's budget crisis for the upcoming biennium, I ask that you remember the great economic, cultural and ecological importance of Puget Sound and its biological resources and strive to develop a budget that builds upon the state's past investments in Puget Sound.

This work plan includes a small number of items that would require enhancements to continuing-level budgets (see Table 2 on page 111). Agency directors included these enhancement proposals in their requests to the Office of Financial Management earlier this year. While I believe that this work plan addresses the key needs of Puget Sound, I fully expect that the state's budget situation may not support the level of enhancement

requested in this plan. If the need arises, I may convene the Action Team during your upcoming legislative session to develop a consensus view of the relative importance of these various enhancement requests and any possible budget reductions that might be proposed by the Governor or a fiscal committee of the legislature.

I look forward to working with you to ensure that we continue the state's long-term commitments to a cleaner and more healthy Puget Sound. Please feel free to call on me for discussion or clarification of any aspect of this work plan before or during the 2003 legislative session. Thank you.

Sincerely,

A handwritten signature in black ink, reading "Scott Redman". The signature is written in a cursive, flowing style with a prominent "S" and "R".

Scott Redman  
Acting Chair

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If you need this document in an alternate format contact the Action Team at (360) 407-7300 or (800) 54-SOUND. Our TDD number is (800) 833-6388.

This work plan is also available on the Action Team's website at: [http://www.wa.gov/puget\\_sound](http://www.wa.gov/puget_sound).



# INTRODUCTION

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**“We need to bring alive the necessity of clean water so that all Americans act as stewards of their water resources.... For safe, clean, abundant water—in our houses, rivers, lakes and streams—is one of our planet’s greatest treasures.”**

*~ Senator John H. Chaffee*

Protecting and restoring Puget Sound requires continued efforts by government agencies, tribes, private industry, environmental and citizen groups, and the individual actions of residents throughout the region. Although progress has been made on a variety of issues, new challenges continue to emerge and many existing problems persist as the region’s population continues to grow and we expand the footprint of developed lands within the basin.

In recent years, significant watershed and salmon recovery planning efforts have begun in response to the listing of salmon as threatened or endangered under the Endangered Species Act. At the same time, local governments are facing reduced revenues with which to address and prevent problems during a time of population growth. Water pollution, loss of wetlands and nearshore habitat, accumulation of toxic chemicals and declines in populations of some animal and plant species require even greater efforts to protect and restore Puget Sound in the next two years.

The *2003-2005 Puget Sound Water Quality Work Plan* is the fourth biennial work plan to be prepared by the Action Team staff. It presents a two-year strategy to protect the Sound in the face of new and continuing problems. It builds on past efforts and identifies the next steps that are needed, recognizing that many problems cannot be resolved in a two-year period.

The goals of the Puget Sound Action Team and Council in developing this work plan are to describe the measurable progress that can be achieved in protecting Puget Sound in the next two years. This plan presents proposed and recommended actions to continue implementing the *Puget Sound Water Quality Management Plan*. The management plan articulates an ongoing comprehensive and coordinated approach to protecting and restoring the water quality and biological diversity of Puget Sound.

The work plan identifies actions that state agencies will take to protect and restore Puget Sound during the 2003-2005 biennium. It also includes actions recommended for local governments. The work plan serves primarily as a budget document for the Washington State legislature. The legislature funds state agency actions for Puget Sound that fit into a larger framework of state, federal, local and tribal programs, as well as academic and private efforts. By looking across this framework and identifying actions that link, coordinate, and leverage those programs, the work plan serves to reduce duplication and fill gaps in a broader effort to protect and restore the Sound.

## **Challenges for the 2003-2005 biennium**

In evaluating priorities and actions for this work plan, the Puget Sound Council and the Action Team staff considered recent scientific findings. The Puget Sound Ambient Monitoring Program, coordinated by the Action Team support staff, collects and communicates information about the condition of Puget Sound. The recent findings of this program and other investigations were presented in *Puget Sound’s Health 2002* and in the *2002 Puget Sound Update* published in September 2002. While the reports provide scientific evidence that some aspects of Puget Sound’s health are improving, they also show that the Sound continues to suffer many damaging effects from the activities of the region’s growing human population.

Recent scientific data indicate that contaminants in mussels and harbor seals have declined slightly, and the acreage of *Spartina spp.*, an aquatic nuisance species, has been reduced. Fish passage for salmon was improved, coho salmon returned in slightly increased numbers, and water temperature measured at five of 20 ambient monitoring stations showed improvement. Populations of harbor seals have tripled since the federal Marine Mammal Protection Act protected them from harvest beginning in 1978.

Evidence of continued environmental problems for Puget Sound includes a decline in four marine bird species by 72 to 96 percent in the past 20 years and sharp declines in herring populations in the north Sound (although increases have occurred in the south and central Sound) and in the spawning potential of rockfish. Scientists believe that the decline of these species, the orca whale, and other marine species may point to significant problems within the entire

Puget Sound ecosystem. Despite the restoration of thousands of acres of shellfish beds since 1980, progress has been slow, and shellfish from 25 percent of the Sound's commercial growing areas are still not safe to eat.

At the same time, the state and local governments are less able to respond to these problems due to the constraints of reduced government revenues that required cuts in the 2002 supplemental budget, and by revenue forecasts that suggest further reductions for the 2003-2005 biennial budget.

Funding for monitoring activities by the Washington Department of Fish and Wildlife for the 2001-2003 biennium was cut by \$493,000 in the 2002 supplemental budget. This cut resulted in reductions in monitoring of toxics in marine mammals, seabird populations, fish contaminants, whiting and herring populations, and green crab presence.

The 1999-2001 work plan received \$27,671,873 of proviso (legislatively earmarked) funding. The Action Team requested \$48,411,235 for the current 2001-2003 work plan. The state budget for the 2001-2003 biennium earmarked \$30,833,632 for the current work plan. But the adopted 2001-2003 budget was changed in 2002, including the \$493,000 reduction in funding for monitoring mentioned above. As a result of these adjustments, the new 2003-2005 work plan anticipates only \$29,639,634 in continuing earmarked funding. With enhancements, the 2003-2005 work plan requests \$33,371,634 in earmarked funding.

State officials have projected a significant shortfall in revenues during the 2003-2005 biennium covered by this work plan. Many of the natural resources agencies with activities in this work plan anticipate having cuts made to their budgets. Although no specific cuts to work plan activities have been identified as of November 2002, cuts may be included in the Governor's budget proposal which will be released in December 2002. In spite of this, several agencies have proposed budget enhancements in this work plan for new or expanded activities to protect Puget Sound (see list of proposed enhancements on page 116). These enhancements have been included in this work plan because they appear to be the most important next steps, should funding be available. If reductions to the continuing earmarked funding are proposed, the Puget Sound Council and Action Team may review them and

recommend priorities for both cuts and enhancements.

Most of the actions in this work plan are considered operating expenses. These include people, monitoring, studies and publications. The total requested budget for operating activities is \$35,527,634 (\$2,996,000 would not be provisoed). In addition, there are construction activities identified in this work plan which are funding through the capital budgets. The requested capital amount is \$1,290,000. Only \$840,000 are proviso funds under this work plan. In addition, the Department of Transportation anticipates spending \$5,402,850 to manage stormwater and mitigate habitat loss for highway projects. For clarity, the three budget tables have been reorganized to separate capital and operating costs.

Local governments that are called upon to update comprehensive plans and ordinances, develop watershed and salmon recovery plans, and meet new federal stormwater requirements have indicated a need for state and federal technical and funding assistance. The coordination of activities through this work plan can reduce duplication of efforts, improve efficiency and focus work on priorities, playing a role that is all the more important to protecting Puget Sound during a period of budget constraints.

## **How the work plan relates to other protection efforts**

The programs of the *Puget Sound Water Quality Management Plan* complement other important efforts by federal, tribal, state and local government, as well as citizen and interest groups to protect water quality and biological resources. These efforts include managing growth, protecting threatened species, planning watershed protection and restoration, and correcting sources of nonpoint or diffuse pollution. The Action Team staff helps coordinate approaches, activities and funding among these programs.

State agency directors who are members of the Action Team are also members of the Governor's Environmental Cabinet, which coordinates the state's efforts to recover salmon. Many of the activities in this work plan that support salmon recovery are called for by the state plan for recovering salmon that was developed by the Governor's Salmon Recovery Office and the Joint Natural Resources Cabinet, an entity that preceded the Environmental Cabinet.



The Puget Sound Shared Strategy Council is coordinating efforts to develop and implement a Shared Strategy for recovery of salmon in Puget Sound. Through this effort, the Shared Strategy Council, watershed and salmon recovery planning groups and state, federal, local, and tribal governments are working together to develop a salmon recovery plan for Puget Sound. The Shared Strategy Council will bring local watershed and nearshore habitat planning efforts together in a regional plan to achieve salmon recovery goals. This work plan contains many actions that contribute to salmon recovery. As additional actions for salmon recovery are identified in the regional recovery plan, they can be supported in future Puget Sound work plans.

Many new watershed plans are being initiated under the Watershed Planning Act (90.82 RCW). These plans are incorporating past watershed planning, including plans developed under Chapter 400-12 WAC, the Local Planning and Management of Nonpoint Source Pollution. Salmon restoration projects are being carried out in many watersheds under the Salmon Recovery Act (Chapter 75.43 RCW) with funding provided through the Salmon Recovery Funding Board.

Puget Sound local governments have a legislative deadline to update their growth management plans and ordinances by either December 2004 or December 2005. State agencies are providing technical assistance to local governments as they update critical areas ordinances to reflect the best available science. In addition, Action Team agencies recognize the integral connections between land use and resource protection, and are working with local governments to develop and implement planning measures that protect and restore natural systems and habitats. Because land use is key to environmental protection, a number of actions in this work plan support these efforts across various programs and agencies.

Local governments contribute a significant portion of the total funds used to restore and protect Puget Sound consistent with management plan implementation. Programs for stormwater and on-site sewage system management, habitat protection, and shellfish protection and restoration depend on local implementation. Local funds used for growth management, watershed, and salmon recovery planning contribute significantly to the regional effort

to implement the work plan; these funds are not reflected in the budget portion of this draft work plan.

Non-governmental organizations, trade associations, private industries, and individual citizens are part of the larger effort to protect the Sound. Active and involved citizen organizations and community groups play important roles in educating their neighbors, restoring or monitoring habitat and water quality, and participating in the civic life of the community to help develop policies and plans that protect the Sound's resources.

Congress has authorized and funded, through the Northwest Straits Conservation Initiative, an effort to protect and restore natural resources in northern Puget Sound. The work is coordinated through the Northwest Straits Commission (NWSC), which is composed of seven county representatives (one from each Marine Resources Committee), five members appointed by the Governor, and one tribal member appointed by the Secretary of the Interior. The NWSC provides oversight and technical assistance to integrate science, coordinate funding, and review projects carried out by the Marine Resources Committees. Through this initiative, locally based projects are developed to address benchmarks related to species recovery, water quality, nearshore habitat, and shellfish protection in the seven-county area. While this work plan does not describe the local actions the Marine Resources Committee will take, it includes state actions for coordination, technical assistance and data collection and analysis that will contribute to the work of the NWSC.

The Puget Sound Nearshore Ecosystem Restoration Project is a federal and non-federal partnership initiated in late 2001 to assess Puget Sound's nearshore habitat and identify and pursue opportunities for restoration and protection. The project is a cooperative effort among state, tribal, federal, and local governments, industries, and environmental organizations. In the coming years, project partners will implement restoration projects along Puget Sound shorelines and estuaries. This work plan proposes actions for technical assistance and monitoring that will support the nearshore project. Specific restoration projects will be reflected in future work plans.

## **Next steps beyond this biennium**

Each program introduction in this work plan includes a section identifying actions recommended by the Puget Sound Council as well as key next steps from

the management plan that were not proposed by agencies. The work plan provides this information in order to draw attention to the next steps needed for specific programs beyond this biennium. During a time of budget restrictions, many of the next steps are not being proposed in this work plan as a result of reduced funds for state agency programs.

## Structure of the work plan

This introduction describes the relationship of proposed work plan actions to ongoing regional initiatives. Agency work plan budgets are included at the end of the introduction (Table 1, page 5). The next section of the work plan identifies ongoing issues and short- and long-term outcomes that will be used to evaluate progress towards addressing them, as well as priorities and recommended actions for each ongoing issue.

The bulk of this work plan lists the actions and their anticipated outputs for the programs in the *Puget Sound Water Quality Management Plan*. Management plan programs focus on major pollution problems, resource issues, and management tools. Within each program section an introduction describes: the goal and strategy of the program (from the management plan); the status of the program; and the relationship of the program's actions to the ongoing issues and to the larger framework of activities not funded through this work plan. Also included is a section identifying the gaps in the proposed actions for each program. Actions proposed by agencies are listed in the action tables by program element and then by state agency. This portion of the work plan also identifies the anticipated outputs, which are the products of each action that the Puget Sound Council will use to evaluate the implementation of the work plan through the biennium.

Table 2 (page 111) provides the detailed listing of expenditures requested by state agencies for implementing the work plan and the funding adjustments requested by agencies. Table 3 (page 115) provides the total work plan budget for each program, with capital and operating funds identified. Table 1 (page 5) shows the requested funds for each state agency. Finally, an index lists the programs with actions for each agency.

## Preparing the work plan

The Puget Sound Action Team staff, with advice from the Puget Sound Council, coordinated the

development of this work plan among Action Team agencies. Preparation of the work plan began in the fall of 2001 with program-related meetings of key state, federal, tribal, and local government staff, regional experts in academia and consulting fields, and representatives of private industry and environmental groups. In December 2001 the Puget Sound Council adopted ongoing issues, priorities, and recommended actions that were conveyed to agency directors in January 2002. Action Team staff met with agencies during the winter and spring of 2002 to develop outcome measures under the guidance of the Council and to consult on the actions the agencies submitted for this work plan.

During the summer of 2002, the Action Team staff accepted public comment on the draft work plan that was published in July 2002. In October 2002 in a joint meeting with the Puget Sound Council, the Action Team reviewed public comment and approved the final work plan for submittal to the Governor and the legislature in December 2002. In June 2003 the work plan will be edited and re-issued to reflect the 2003-2005 budget approved by the legislature.

**Table 1. 2003-2005 Work Plan Budget by Agency**

<b>Agency</b>	<b>Operating vs. Capital Funds</b>	<b>Continuing Proviso Management Plan Funding</b>	<b>Other Continuing Funding</b>	<b>Proposed Adjustments</b>	<b>Total</b>	<b>Total Proviso Funding</b>
Agriculture	Operating	\$74,500			\$74,500	\$74,500
Office of Community Development	Operating	\$123,000			\$123,000	\$123,000
Conservation Commission	Operating	\$494,000		\$150,000	\$644,000	\$644,000
	Capital	\$840,000			\$840,000	\$840,000
	<b>Total</b>	\$1,334,000		\$150,000	\$1,484,000	\$1,484,000
Ecology	Operating	\$14,884,555	\$2,921,000	\$2,800,000	\$20,605,555	\$17,684,555
Fish and Wildlife *	Operating	\$2,711,427		\$422,000	\$3,133,427	\$3,133,427
Health	Operating	\$3,369,202			\$3,369,202	\$3,369,202
Natural Resources	Operating	\$1,042,950		\$300,000	\$1,342,950	\$1,342,950
Puget Sound Action Team	Operating	\$5,108,000			\$5,108,000	\$5,108,000
State Parks and Recreation Commission	Operating	\$191,000	\$75,000		\$266,000	\$191,000
	Capital		\$450,000		\$450,000	
	<b>Total</b>	\$191,000	\$525,000		\$716,000	\$191,000
Transportation **	Operating			\$4,217,000	\$4,217,000	
University of Washington	Operating	\$470,000			\$470,000	\$470,000
Washington State University	Operating	\$331,000		\$60,000	\$391,000	\$391,000
All Agencies Operating		\$28,799,634	\$2,996,000	\$3,732,000	\$35,527,634	\$32,531,634
All Agencies Capital		\$840,000	\$67,582,000		\$68,422,000	\$840,000
<b>TOTAL All Agencies</b>		<b>\$29,639,634</b>	<b>\$7,663,000</b>	<b>\$3,732,000</b>	<b>\$41,034,634</b>	<b>\$33,371,634</b>

\* The 2001-2003 funding proviso for the Department of Fish and Wildlife reflects a reduction of \$493,000 in the 2002 supplemental operating budget for the agency.

\*\* The Department of Transportation anticipates spending \$5,401,850 for stormwater, wetlands and habitat mitigation for construction projects.



# ONGOING ISSUES, PRIORITIES, AND RECOMMENDED ACTIONS FOR THE 2003-2005 BIENNIUM

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The ongoing issues listed in this section of the work plan define regional problems that will be resolved over more than one biennium through the efforts of a number of governments, agencies, and programs, as well as citizens and businesses. For each ongoing issue (with the exception of monitoring and education), the Puget Sound Council has identified the following based on recommendations of Action Team staff and state agencies:

- ☐ Long-term environmental outcomes that represent a significant aspect of resolution of the issue.
- ☐ Biennial outcome measures that set a target for the next two years as a specific step toward achieving the long-term outcome.

The Action Team and Puget Sound Council will provide an interim evaluation of the outcomes in the biennial report to the legislature in December 2004 and a final evaluation of the outcomes after the end of the 2003-2005 biennium. For each ongoing issue, one or more priorities are identified as programmatic approaches to addressing the issue.

The work plan also specifies the actions that were recommended as next steps by the Puget Sound Council to Action Team agencies in January 2002.

**Although the work plan identifies ongoing issues for regional and intergovernmental coordination and focus, work on other issues is equally important. Work to address all issues facing Puget Sound should continue, as identified in the *Puget Sound Water Quality Management Plan* and in this work plan in programs covering agriculture, spills, municipal and industrial discharges, marinas and recreational boating, local watershed action, and shared waters. Many of the actions in the work plan contribute to resolving ongoing issues and are necessary to maintain the gains of previous work.**

The following is a description of each ongoing issue and the associated long-term and biennial outcome measures, priorities, and recommended actions for the 2003-2005 biennium.

## ► SALMON, GROUND FISH, FORAGE FISH, AND OTHER SPECIES AT RISK

### Issue

Populations of marine species in Puget Sound, such as salmon, ground fish, and orcas, appear to be declining at an alarming rate. Some of the most likely causes are over-fishing, variations in ocean conditions, degradation of water and sediment quality, and degradation and loss of habitat.

### Outcome Measures

**Long-term:** Balanced, stable and self-sustaining populations of all indigenous marine species in Puget Sound.

### Biennium:

1. Forage fish inventories are completed for 30 percent of Puget Sound counties.
2. Marine shoreline development is protective of forage fish spawning grounds as identified by forage fish spawning inventories.
3. Two marine reserves are identified and designated.
4. Monitoring programs are in place to measure the effectiveness of marine reserves in achieving recovery of bottomfish species.

Priorities	2003-2005 Recommended Actions
Government agencies and interested groups should develop and implement conservation and recovery plans to protect and restore Puget Sound's ground fish, forage fish, salmon, and other species at risk and also promote incentives for voluntary restoration and enhancement of habitat. State and tribal governments, as fisheries co-managers, should work with federal agencies to provide data on at-risk species, guidance, technical assistance and funding to support development and implementation of these plans.	<ol style="list-style-type: none"> <li>1. State and federal agencies, tribal and local governments, and watershed groups should cooperate to carry out the Puget Sound Shared Strategy for salmon recovery in Puget Sound.</li> <li>2. State and tribal fisheries co-managers should adopt and implement a conservation and recovery plan for ground fish.</li> </ol>
Marine protected areas should be considered as a tool to protect biodiversity and help to recover declining marine species. Any management action or proposed action must acknowledge and uphold tribal treaty rights and co-management roles of affected tribal governments.	<ol style="list-style-type: none"> <li>1. The Department of Fish and Wildlife should regularly monitor and evaluate existing marine protected areas and work in partnership with local groups, tribes and others to educate the public about the status of marine fish species and recovery needs.</li> <li>2. The Action Team staff should work with the departments of Fish and Wildlife and Natural Resources, the state Parks and Recreation Commission; tribal governments; and non-governmental organizations to develop criteria and standards for marine protected areas, coordinate research efforts relevant to marine protected areas, identify gaps in marine protection Soundwide, and designate marine protected areas.</li> </ol>
A rescue tug should be permanently located at Neah Bay to respond to vessel emergencies to prevent major oil spills and potential loss of life, vessels, and cargos.	<ol style="list-style-type: none"> <li>1. Long-term funding to maintain a dedicated rescue tug at Neah Bay should be provided by the legislature. Ecology should continue to pursue federal funding.</li> </ol>

## ► MARINE AND FRESHWATER HABITAT

### Issue

Puget Sound's freshwater and marine habitats have experienced significant loss and alteration as a result of development and growth in the region.

### Outcome Measures

**Long-term:** A net gain in ecological function and area of stream, nearshore and estuarine habitats within Puget Sound.

### Biennium:

1. Increased acreage of tidally and seasonally influenced estuarine wetlands as a result of three or more dike removal projects.
2. Protection of natural delivery of sediment and organic matter by restoring the natural functions of one or more Puget Sound drift cells.
3. Permanent protection of key marine and freshwater habitat properties.
4. Completion of two watershed plans that incorporate the concept of net habitat gain.

### Ongoing Issues

Priority	2003-2005 Recommended Actions
Governments and landowners should restore and protect habitat to improve conditions for all life history stages of salmon, spawning forage fish and other species. Habitat protection should include: minimizing the use of shoreline stabilization structures; strengthening programs for land acquisition and preservation; and adopting fish-friendly zoning, critical areas ordinances, and stormwater and shoreline management programs. State and federal agencies and tribal governments should provide guidance and technical assistance to local governments.	<ol style="list-style-type: none"> <li>1. Action Team staff, the departments of Fish and Wildlife, Natural Resources, and Ecology, with local tribal and federal partners, should participate in the Puget Sound Nearshore Ecosystem Restoration Project by facilitating the compilation and synthesis and dissemination of high value data sets on nearshore habitats and the resources they support.</li> <li>2. Action Team staff, the Department of Fish and Wildlife and the Office of Community, Trade and Economic Development should provide technical assistance to local jurisdictions in updating their comprehensive plans, critical areas ordinances and shoreline master programs, including guidance on water quality, marine shoreline development, habitat restoration and stormwater management.</li> </ol>

## ► CONTAMINATED SEDIMENTS

### Issue

More than 5,000 acres of Puget Sound have levels of sediment contamination that poison marine life.

### Outcome Measures

**Long-term:** Sediment management standards achieved in all locations in Puget Sound.

### Biennium:

1. All existing sediment cleanup projects proceed on schedule.
2. At least 500 acres of contaminated sediments are remediated, including necessary source controls.
3. The Dredged Material Management Program is applied resulting in additional reductions of sediment contamination.

Priority	2003-2005 Recommended Actions
Governments and interested entities should work with responsible parties to remediate contaminated sediment sites and to prevent recontamination. Government agencies should incorporate adequate requirements in wastewater discharge permits so that new and continuing wastewater discharges do not result in violations of the sediment management standards.	<ol style="list-style-type: none"> <li>1. The Department of Natural Resources and other public entities with sites should remediate contaminated sediment sites on state lands.</li> <li>2. Action Team staff, the departments of Ecology, Natural Resources, and Fish and Wildlife, and the U.S. Army Corps of Engineers should integrate sediment cleanup into marine and estuarine shoreline habitat planning and restoration.</li> <li>3. For individual wastewater permits where sediment contamination is found, the Department of Ecology and the Environmental Protection Agency (EPA) should add appropriate conditions to eliminate further contamination.</li> </ol>

### Ongoing Issues

Priority	2003-2005 Recommended Actions
	4. The Department of Ecology and EPA should continue the wastewater discharge permit program.

## ► SHELLFISH PROTECTION

### Issue

Water quality problems continue to threaten the safe harvest of shellfish from a number of areas around Puget Sound.

### Outcome Measures

**Long-term:** Water quality is adequate to prevent and eliminate harvest restrictions in shellfish growing areas.

### Biennium:

1. Prevent the downgrade of threatened shellfish growing areas and restore 1,000 acres approved for commercial harvest.
2. Increase the number of classified recreational beaches and the percentage of harvesters on approved beaches by 5 percent.
3. Increase by 5 percent the number of sampling stations with decreasing levels of bacterial contamination at “core” shellfish growing areas (assessed annually).

Priorities	2003-05 Recommended Actions
Governments and other organizations should expand and enhance programs and infrastructure to educate and engage people in shellfish harvesting and water quality protection. Governments and citizens should collaborate to implement land use plans and pollution control programs that effectively and permanently protect and restore shellfish beds throughout the Sound.	<ol style="list-style-type: none"> <li>1. Action Team staff, the departments of Health, Ecology, Fish and Wildlife, and local governments and others should assess and enhance local programs and infrastructure to more effectively educate and involve people in community-based shellfish protection.</li> <li>2. Action Team staff, the departments of Health, Ecology, and Fish and Wildlife, local governments, tribal governments and others should develop and support programs to increase public access, promote shellfish gardening and community farming, and provide other hands-on stewardship and harvest opportunities.</li> </ol>
Governments and other organizations should respond promptly to pollution threats that are identified under the state Department of Health’s early warning system. These groups should collaborate with citizens to design and carry out targeted strategies to define and correct emerging problems and also provide meaningful follow-up to ensure lasting protection.	<ol style="list-style-type: none"> <li>1. The Department of Health should continue to monitor shellfish areas, evaluate water quality trends, identify threatened areas, assess pollution sources and recommend corrective actions in partnership with other state agencies, local governments, and community organizations.</li> <li>2. The departments of Health and Ecology, Action Team staff, tribes, local jurisdictions and others should collaborate to carry out organized strategies to correct water quality problems in threatened areas and prevent growing area downgrades.</li> </ol>

### Ongoing Issues



## ► STORMWATER

### Issue

Stormwater runoff continues to degrade Puget Sound's water quality, streams and wetlands, and biological resources.

### Outcome Measures

**Long-term:** Water quality standards achieved in all locations in the basin.

### Biennium:

1. Twenty-five percent increase in the number of jurisdictions adopting comprehensive stormwater programs.
2. Reduction in the number and volume of combined sewer overflows, consistent with reduction plans approved by Ecology.
3. Issuance or reissuance of all NPDES municipal, industrial and construction stormwater permits.
4. Revision of a highway runoff manual that is technically equivalent to the Stormwater Management Manual for Western Washington.
5. Decrease during the years 2002 to 2004 in the number of Puget Sound basin water bodies included on Ecology's list of impaired waters (303d List) because of pollution or habitat degradation attributed to stormwater runoff or combined sewer overflows.
6. Positive changes in the conditions and classifications of shellfish growing areas affected by stormwater runoff.

Priorities	2003-2005 Recommended Actions
Local governments, transportation and federal facilities should adopt and implement stormwater programs as defined in the <i>Puget Sound Water Quality Management Plan</i> . State agencies should provide guidance and technical and financial assistance to local governments to help them implement effective stormwater management programs.	<ol style="list-style-type: none"> <li>1. All local governments, the Department of Transportation, and federal facilities should develop and carry out comprehensive stormwater programs.</li> <li>2. The Department of Ecology should establish and lead a technical review committee to review and approve new best management practices according to established protocols, and should incorporate new information into the stormwater technical manual.</li> <li>3. The Department of Ecology should finish issuing and support implementation of NPDES municipal, construction and industrial permits.</li> </ol>
Local governments, Transportation and federal facilities should remove impediments to and encourage the use of low impact development practices, where appropriate. State and federal agencies should provide technical assistance and guidance.	University of Washington, Washington State University, the departments of Ecology and Transportation, Action Team staff, and local governments should cooperatively research and demonstrate low impact development practices, with advice from a broad-based committee that should identify short- and long-term needs for research.

## ► ON-SITE SEWAGE SYSTEMS

### Issue

Bacterial contamination is present in unacceptable concentrations in many of the Sound's streams and nearshore marine waters. Local health jurisdictions lack the resources to effectively address pollution from on-site sewage systems.

### Outcome Measures

**Long-term:** Bacterial standards are achieved in all locations in the Puget Sound basin.

### Biennium:

1. Reduction during the years 2002 to 2004 in the number of Puget Sound basin water bodies included on the Department of Ecology's list of impaired waters (303d List) because of pollution attributed to on-site sewage systems.
2. Increases in harvestable acreage in shellfish beds located adjacent to areas developed with concentrations of on-site sewage systems.
3. Number of local health jurisdictions having developed and formally adopted risk-based on-site sewage system management plans.

Priority	2003-2005 Recommended Actions
Local health jurisdictions should have in place an on-site sewage system management program that ensures effective operation and maintenance of these systems. State agencies should provide consultation and support to assist each local health jurisdiction to develop an effective program for management of on-site sewage systems.	<ol style="list-style-type: none"><li>1. Local health jurisdictions should identify areas of special concern and apply risk-based controls to the construction, operation and maintenance of on-site systems used in these areas.</li><li>2. State agencies should provide funding, technical assistance, and education to support local health jurisdictions' on-site sewage programs.</li><li>3. Action Team support staff should administer a grant program to assist local health jurisdictions in obtaining repairs to failing on-site sewage systems.</li></ol>

## ► AQUATIC NUISANCE SPECIES

### Issue

Unauthorized or accidentally introduced non-native aquatic species in Puget Sound threaten the diversity and abundance of native species, the ecological stability of infested waters and commercial, agricultural or recreational activities that depend on these waters.

### Outcome Measures:

**Long-term:** All areas of Puget Sound free of *Spartina spp.* and other aquatic nuisance species.

**Biennium:** Reduce solid acreage of *Spartina spp.* infestation by 20 percent.

Priority	2003-2005 Recommended Actions
Tribal, federal, state and local governments, businesses and citizens organizations should prevent the unauthorized or accidental introduction of non-native species to Puget Sound. State agencies should improve and systematically monitor non-native aquatic nuisance species and take quick action to contain or eradicate them.	<ol style="list-style-type: none"> <li>1. The Department of Fish and Wildlife should monitor European green crab in Puget Sound and take aggressive action to eradicate discovered populations.</li> <li>2. Action Team staff and others should implement the Aquatic Nuisance Species monitoring strategy developed during 2001-2003.</li> <li>3. The Department of Fish and Wildlife will staff a work group to study ballast water treatment options and costs to be completed by June 2004.</li> <li>4. The Department of Fish and Wildlife will classify and regulate non-native aquatic animals; designate waters infested by invasive species; develop a plan to inspect watercraft entering the state on commercial carriers; and develop a rapid response plan to quickly and effectively to contain and eradicate newly identified invasive species.</li> </ol>

## ► MONITORING

### Issue

State, federal and local agencies need to provide shared and coordinated data and analyses on key components of Puget Sound resources to assist decision-makers at local and state levels. These data and analyses should assess the health of Puget Sound and the effectiveness of the *Puget Sound Water Quality Management Plan* as well as provide support to resource management at the local level.

Priority	2003-2005 Recommended Actions
State agencies and local governments should continue to implement the Puget Sound Ambient Monitoring Program (PSAMP). This long-term monitoring program is essential to assessing the health of Puget Sound ecosystems, gauging the effectiveness of environmental and land-use decisions and detecting early warnings of ecosystem impairment or collapse, all of which are essential to informed decision-making.	<ol style="list-style-type: none"> <li>1. State, federal and King County investigators should continue to implement the data collection, analysis and distribution that constitute the PSAMP.</li> <li>2. Action Team support staff will coordinate an effort by PSAMP to conduct and report on diagnostic studies of Puget Sound problems identified through ambient monitoring.</li> </ol>

## ► EDUCATION

### Issue

Many residents of Puget Sound are unaware of the effects their individual behaviors have on the water quality and resources of the Sound. Education and involvement are needed to build public understanding and support and create the political will for restoration and protection of the Sound.

Priority	2003-2005 Recommended Actions
State, tribal, local and federal governments should provide educational leadership, guidance, coordination, opportunities and resources that promote the improvement of water quality and habitat in the Puget Sound region.	<ol style="list-style-type: none"><li>1. The Public Involvement and Education (PIE) Program should continue to provide funding and technical support for community-based education projects that protect the health of Puget Sound and address priority issues in the <i>2003-2005 Puget Sound Water Quality Work Plan</i>.</li><li>2. Washington Sea Grant and WSU Cooperative Extension water quality field agents should continue to provide local coordination, technical assistance, education and support for public involvement for regional water quality and habitat groups, local decision-makers, schools, local health jurisdictions and communities in order to protect Puget Sound and address priority issues in the <i>2003-2005 Puget Sound Water Quality Work Plan</i>.</li><li>3. State agencies should continue to work with the Office of the Superintendent of Public Instruction to develop environmental education that conforms to state education standards and assessments for grades K-12.</li><li>4. State agencies and interested parties should provide education on nutrient pollution.</li></ol>

# ACTIONS TO PROTECT AND RESTORE PUGET SOUND DURING THE 2003-2005 BIENNIUM

## ABOUT THE ACTIONS

The following sections of this report describe the actions that state agencies propose to take to protect and restore Puget Sound during the 2003-2005 biennium. Actions recommended for local governments are included for some programs. The sections correspond to programs from the *2000 Puget Sound Water Quality Management Plan*.

Each section includes an introduction describing the program status, and how the work plan actions relate to ongoing issues and to work not funded through this work plan.

State agencies proposed the actions on the following pages. Actions that are requests for new funding are labeled as enhancement requests. Each action includes anticipated outputs, which are results or products of the action that will serve as the basis for agency progress reports.

**Puget Sound Plan Element:** In some entries, the program element is shown as a "0," as in "MB-0." This indicates that the action is not specifically mentioned in the *Puget Sound Water Quality Management Plan* but is consistent with program goals or strategies.

**Guide to Puget Sound Plan program abbreviations:**

AG	Agricultural Practices
ANS	Aquatic Nuisance Species
EM	Estuary Management & Plan Implementation
EPI	Education & Public Involvement
MB	Marinas & Recreational Boating
M	Monitoring, Research and Laboratory Support
OS	On-Site Sewage Systems
P	Municipal & Industrial Discharges
NP	Nonpoint Source Pollution
S	Contaminated Sediments
SF	Shellfish Protection
SP	Spills Prevention & Response
SW	Stormwater and Combined Sewer Overflows
PS/GB	Puget Sound/Georgia Basin Shared Waters
MFH	Marine and Freshwater Habitat Protection
WP	Local Watershed Action

**Budget Code:** This column is used for state agency actions and indicates the budget category that supports the action. Budget categories and related amounts and fund sources are listed in Table 2 at the end of the work plan. Entries show the agency initials followed by a number, such as DFW-05 for Department of Fish and Wildlife budget category number 05. The budget information for each budget code is in Table 2. A zero after the agency initials indicates that the budget for the action is not funded under a proviso for work plan implementation, but is included at agency request.

WSDA	Department of Agriculture
CTED	Department of Community, Trade and Economic Development
CC	Conservation Commission
DOE	Department of Ecology
DFW	Department of Fish and Wildlife
DOH	Department of Health
DNR	Department of Natural Resources
PRC	State Parks and Recreation Commission
PSAT	Puget Sound Water Quality Action Team
DOT	Department of Transportation
UW	University of Washington Sea Grant Program
WSU	Washington State University Cooperative Extension

**Action ID:** Numbers in this column will be used by the Action Team to track and report on actions.

	Budget Code	Action ID
MB-0	DOE-02	200
MB-1	PRC-02	202



# PUGET SOUND ESTUARY MANAGEMENT

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## ***Puget Sound Water Quality Management Plan Goal***

- To protect and restore Puget Sound through effective coordination among governments and private interests, and through use of an adaptive management approach.

## **Strategies for achieving the goal**

- Maintain, evaluate and update the *Puget Sound Water Quality Management Plan* as needed.
- Develop and implement Puget Sound work plans each biennium.
- Require accountability by implementing agencies.
- Evaluate the effectiveness of the biennial work plans in meeting the goals of the management plan.
- Obtain adequate funding to implement the management plan and work plans.
- Provide technical assistance for implementers.
- Provide strong law enforcement of all relevant environmental laws.
- Ensure that federal activities are consistent with the intentions of the management plan.

## **Current status of the program**

The single biggest challenge to effectively protecting and restoring Puget Sound is coordinating the multiple governmental entities that can have an impact on water quality. There are currently 113 cities, 12 counties, 12 conservation districts, 12 local health jurisdictions, 28 local port districts, three regional governmental bodies, 22 tribes, 14 state agencies and 9 federal agencies in this category. There are also literally hundreds of special purpose districts for water, sewer, groundwater, drainage and irrigation that can also affect the quality of our water resources.

Each of these entities has its own set of responsibilities and priorities. Each has a unique constituency and ability to collect revenue and set policy. In this context, Puget Sound's protection is often weighed against other important issues demanding attention at the local level. Thus the challenge for protecting Puget Sound is a

combination of educating the public and governmental bodies about the importance of this undertaking and ensuring sufficient funding is available for the tasks to achieve the goals.

The *Puget Sound Water Quality Management Plan* provides a framework for managing and protecting Puget Sound. Every two years the Puget Sound Action Team develops a biennial work plan based on the management plan, and the Puget Sound Council oversees its implementation. The work plan provides a vehicle for coordinating and focusing efforts to ensure the maximum benefit from the limited resources available for the tasks at hand. The work plan also provides an opportunity for addressing the intergovernmental nature of the problems being faced and the solutions being sought. In addition, it is an opportunity to coordinate growth management, watershed planning, habitat protection and water quality efforts.

## **How the Estuary Management actions address the work plan issues**

The Estuary Management and Plan Implementation Program serves as an umbrella program for the entire work plan. Under the procedures and framework established in the Estuary Management program, the management plan and work plan are developed, adopted and implemented. The Action Team and Council identify priorities, issues and recommended actions to protect Puget Sound and its resources. Actions in the work plan are ultimately carried out by federal, tribal, state and local governments, and other entities.

To best ensure that plan implementation efforts are successful it is critical that sufficient funding be available. The Action Team advocates that federal and state grant and loan programs receive the full amounts authorized in legislation to support activities by local and tribal governments to protect Puget Sound. The Action Team support staff also supports enhancing the capacity of local jurisdictions to fund local programs. Adequate funding is critical for ensuring success in efforts to protect the Sound. Action Team staff also provides technical assistance and public education to support implementation of local programs called for in the management plan.

The *Puget Sound Water Quality Management Plan* is also the state's Comprehensive Conservation and Management Plan (CCMP) under Section 320 of the federal Clean Water Act under the National Estuary Program. The Puget Sound CCMP is supported, in part, by federal technical and financial assistance, which helps to implement other programs in this work plan.

## **2003-2005 Budget Request for State Actions**

Total Proposed Funding	\$1,758,228
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### **How work plan actions support a larger effort**

Managing efforts to protect Puget Sound is necessarily an intergovernmental and interagency endeavor. All of the agencies that are implementers of the work plan are also responsible for other actions that clearly benefit Puget Sound, but are not explicitly called out in the work plan. In this sense, the work plan actions fill gaps, leverage other programs, and coordinate other efforts that are essential for protecting the natural and biological resources of Puget Sound.

Most of the actions in this program describe how the Action Team staff will assist in efforts to implement the Puget Sound management and work plans. This involves coordinating the preparation and implementation of the Puget Sound work plan, updating the entire management plan as needed, evaluating successes and shortcomings of implementing the work plan, and providing educational and technical assistance to implementers of the plan. These are all necessary steps for the other programs that address issues and priorities for Puget Sound. They are also actions that occur using funds that have been specifically provided by the legislature for this purpose.

### **Next steps beyond this biennium**

The management plan calls for state agencies to seek funding to provide greater financial assistance to local and tribal governments and recommended that the Puget Sound Grants Program could serve this purpose. This program has not been proposed due to budget constraints, completing priorities and other barriers. As a result, local governments continue to rely on other programs for grant funding to support implementation of the management plan.



STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>EM-1      <u>Institutional Structure</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Support development of state and federal environmental policies, programs and regulations that protect Puget Sound. Provide technical assistance to help implementing agencies use best available science in implementing this work plan.	Improved policies, programs and regulations to better protect Puget Sound and its biological resources.	PSAT-03	1
<b>EM-2      <u>Planning for Puget Sound</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Prepare the 2005-2007 Puget Sound Water Quality Work Plan that will identify priorities and critical inter-agency and inter-governmental next steps for protecting water quality in Puget Sound. Involve the Puget Sound Action Team and Puget Sound Council in key decisions. Involve governments, interested parties and the public in preparing the plan.	Submittal of the 2005-2007 Puget Sound Water Quality Work Plan to the legislature in December 2004.	PSAT-01	2
Work with other Action Team agencies to support salmon recovery planning by the Puget Sound Salmon Forum and Shared Strategy, with a focus on promoting consistency with the Puget Sound Water Quality Management Plan.	Participation at meetings and workshops, assistance with outreach activities, advisory role on monitoring and science issues, review and comment on documents.	PSAT-01	3
Work with other Action Team agencies and interested parties to protect and recover other species at risk, including the Southern Resident Orca stock and declining marine bird populations. Support marine biodiversity through participation in appropriate forums.	A set of actions to recover orca will be developed through state and federal efforts and implementation will begin where funding is available. A coordinated research program to address declines in marine birds will be designed and implementation will begin. State biodiversity planning will include marine habitats.	PSAT-04	4
<b>EM-3      <u>Adaptive Management</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Evaluate implementation of the Puget Sound Water Quality Management Plan using a variety of programmatic and environmental measures, specific case studies, and trends in environmental indicators, as funding and resources allow.	Improved process to measure and assess the implementation and effectiveness of this work plan and to integrate improvements into future work plans.	PSAT-04	5

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>PUGET SOUND ACTION TEAM</b>			
Improve tracking and reporting on programmatic and environmental indicators of Puget Sound plan program implementation and program and plan effectiveness.	Annual report of state agency work plan progress for the Puget Sound Council. Biennial report to the legislature in December 2004 summarizing the successes, shortcomings and suggested responses for program implementation. Annual Government Performance and Results Act (GPRA) report to the Environmental Protection Agency. Reports will be aligned to improved tracking measures.	PSAT-04	6
<b>EM-4      <u>Increased Funding</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Participate in interagency and intergovernmental efforts that are intended to coordinate information on and develop policy suggestions for managing state and federal funding programs.	Representation of the Action Team staff on Ecology's Water Quality Financial Assistance Council, the Infrastructure Assistance Coordinating Council, and other bodies, as appropriate, to ensure these groups give appropriate consideration to Puget Sound, water quality and watershed-based management and control of nonpoint source pollution.	PSAT-04	7
Collect and distribute information on sources of funding to local and tribal governments and non-governmental organizations through the Action Team website, newsletter and other means.	Accessible, comprehensive and timely information on funding sources for local and tribal governments and non-governmental organizations.	PSAT-04	8
The Puget Sound Action Team recommends that agencies administering grants and loan programs give priority, to the extent possible under statutory requirements, to actions identified in the work plan, as called for in EM-4 of the management plan.	Competitive grant and loan programs to provide funds to water quality projects, as appropriate.	PSAT-04	9

# MARINE AND FRESHWATER HABITAT PROTECTION

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## ***Puget Sound Water Quality Management Plan Goal***

- To preserve, restore and enhance the ecological processes that create and maintain marine and freshwater habitats and to achieve a net gain in ecological function and area of those habitats within the Puget Sound basin.

## **Strategies for achieving the goal**

- Develop comprehensive programs to protect marine and freshwater habitats that include planning, stewardship, education and regulation.
- Improve program practices and scientific knowledge of marine and freshwater habitats.
- Create and maintain an accurate accounting of habitat gains and losses as a result of permitting actions.
- Preserve remaining natural marine and freshwater habitats.
- Measure progress through performance measures and adjust programs as needed.
- Pursue funding for implementation of the *Puget Sound Water Quality Management Plan* and related activities from all available federal, state and local government and private sources.

## **Current status of the program**

Marine and freshwater habitats throughout the Puget Sound basin support a wide variety of plants and animals crucial to the overall health of Puget Sound. Wetlands, eelgrass and kelp beds, beaches, bluffs, mudflats and other lands adjacent to the water have special physical characteristics that are built over time by processes such as flooding, erosion, deposition, and colonization by specially adapted plants and animals. Many of these habitats have been lost or degraded by human activities, both directly and as a result of changes to natural hydrologic and geologic processes. Additional declines of species such as orca whales and a variety of bottomfish suggest that ecosystem-wide analysis and response is necessary.

The state supports a number of initiatives to address habitat loss, including salmon recovery, growth management, shoreline management, and watershed planning. These initiatives are beginning to benefit from increased efforts to understand and assess

natural processes and are incorporating new findings into plans and policies. A challenge for the 2003-2005 biennium will be to implement and evaluate habitat protection measures and actions so that ecosystem functions do not further deteriorate. The *Puget Sound Water Quality Management Plan* calls for the protection of marine and freshwater habitats and for compensation of historic losses through restoration activities. Information about the distribution of marine and freshwater habitats across the landscape demonstrates that efforts should be focused on restoring the processes necessary to maintain the health of those habitats, rather than focusing on site-specific restoration. In the end, this will more closely achieve the goal of net gain in ecological function and area.

## **How the Marine and Freshwater Habitat actions address work plan issues and priorities**

The Marine and Freshwater Habitat program actions support work plan priorities by addressing two specific issues. The program addresses the issue of declining marine species populations by supporting local government efforts to manage shorelines and critical areas. It also supports the evaluation of tools such as marine protected areas, and addresses the issue of habitat loss by targeting efforts to permanently protect functioning marine and freshwater habitats and to restore natural ecological processes across the landscape.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

## **How work plan actions support a larger effort**

The work plan actions address key gaps in our current understanding of freshwater, estuarine and marine ecosystem processes. These science-based actions bring together larger groups of agency and non-governmental experts across disciplines to discuss how marine and freshwater habitats work to support populations of fish and wildlife and how protection and restoration efforts can move the whole

Puget Sound ecosystem toward higher function. Most notably, the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP) combines the talents and resources of a number of state and federal agencies, local governments, tribes and non-governmental organizations to protect and restore nearshore habitats. While PSNERP does not have a specific budget code in this work plan, continuing proviso actions support this project.

Another effort underway involves participation in the Department of Fish and Wildlife's Hydraulic Project Approval (HPA) Task Force. The legislature asked this broad-based stakeholder group to make recommendations on a fee structure and strategy to prevent jurisdictional overlaps with Ecology on stormwater issues. The task force also reviewed the program's operations and is recommending ways to improve the consistency of HPA permits, streamline the permitting process and improve compliance with permit conditions.

The work plan's targeted strategy will be augmented by a number of other new and ongoing programs that support the goal of the *Puget Sound Water Quality Management Plan*. Local governments will continue to have a key role in making land use decisions that support Puget Sound. Ongoing monitoring efforts will inform the experts and education programs will bring new understanding to decision-makers and the public. State and federal agencies will provide a wide range of technical assistance to local governments and individuals through work plan actions as well as by programs not represented in this work plan. For example, the Department of Transportation has projected approximately \$1,752,000 in the 2003-2005 biennium for wetland and habitat work in Puget Sound construction projects. Coordination among this and other programs should be maintained to provide for improved efficiency and to support statewide initiatives for salmon recovery and watershed planning.

Local, state, tribal and federal salmon recovery efforts support the restoration of marine and freshwater habitat. The Northwest Straits Commission and local Marine Resources Committees provide important planning, funding and prioritization for marine species and habitat in the north Puget Sound region. Many habitat acquisition and restoration projects are coordinated by a partnership of private and governmental organizations known collectively as the Pacific Coast Joint Venture.

## Next steps beyond this biennium

The *Puget Sound Water Quality Management Plan* calls for Fish and Wildlife, Ecology, and Natural Resources to quantify changes in acreage and type of marine and freshwater habitats that are associated with HPAs, Clean Water Act Section 401 certifications of the Corps of Engineers permits, forest practices permits and aquatic land use authorization through administrative means such as permit and lease databases and aquatic reserve designations. This has not been achieved or proposed by agencies due to budget considerations, competing priorities or other barriers.

## 2003-2005 Budget Request for State Actions

Proposed Enhancements	\$358,000
Total Proposed Funding	\$3,057,069

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>MFH-1.3 Education</u></b>			
<b>UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM</b>			
Provide technical assistance, education, and information to groups working to protect and restore salmonids and shellfish habitat, including education to prevent pollution from nutrients and pathogens.	A nearshore education program to help shoreline residents better understand and implement best management practices for the marine shoreline.	UW-01	10
<b><u>MFH-2 State Technical Assistance</u></b>			
<b>DEPARTMENT OF FISH AND WILDLIFE</b>			
Provide technical assistance to federal and state agencies to increase protection of fish and wildlife through these other organizations' authorities. Provide direct technical assistance on major marine construction projects to local governments, ports, private individuals, and WDFW permit staff. Provide technical assistance to regulatory agencies on major contaminated sediment cleanup projects. Participate as full partner in significant Natural Resource Damage Assessment (NRDA) efforts. Coordinate WDFW participation in implementing the Puget Sound Water Quality Management Plan and biennial work plan.	Review of all key documents regarding Water Quality Standards, Nonpoint Pollution management, pesticide management, etc; maximized integration of fish protection measures. Early identification of fish and wildlife protection concerns with all major marine development projects; minimization of project impacts; successful development of associated compensatory mitigation. Identification of fish and wildlife protection concerns with all major contaminated sediment cleanup projects; adequate compensatory mitigation obtained. Identification and quantification of injured resources and damages at Commencement Bay and Lower Duwamish/Elliott Bay Superfund sites; construction of 4-10 restoration projects. Delivery of all required Puget Sound Action Team work plan amendments and annual reports.	DFW-03	11
Provide locally-based technical assistance on water quality and habitat. Support inclusion of fish and wildlife protection measures in local planning processes. Assist development and implementation of watershed plans and related salmon recovery efforts.	Fish habitat protection measures in all local watershed plans. Coordinated development of 20-40 salmon restoration projects. Up-to-date resource information provided to 100% of local partners.	DFW-04	12
<b>DEPARTMENT OF ECOLOGY</b>			
Facilitate better stewardship of wetlands by developing and updating technical assistance materials and providing specialized technical assistance to local governments on non-regulatory protection of wetlands. Provide assistance on the use of stewardship tools to protect salmon. Administer grants and participate in site-specific preservation/restoration activities.	Revised and updated technical assistance materials. Support of local government activities related to non-regulatory protection of wetlands. Successful grant administration and site-specific activities.	DOE-08	13

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>DEPARTMENT OF ECOLOGY</b>			
Facilitate the continued development and implementation of a watershed-based program to restore wetlands. The focus is on training state and local government staff in methods for watershed based restoration, participating as opportunities arise in developing methods for assessing large-scale ecological processes, and participating as appropriate in assisting local governments in the planning and implementation of restoration and monitoring projects.	A training curriculum for Ecology wetlands staff and local government staff. Methods for a spatially referenced database evaluating the changes in ecological processes for the entire Puget Sound region through a collaborative effort with the Pacific Northwest Laboratory.	DOE-08	14
Assist local governments in developing and implementing local wetland protection programs including development of new policy and regulatory language, development of new best available science documents and tools, and on-going technical assistance on wetland delineation, function assessment and mitigation measures.	A two volume document summarizing current scientific information on freshwater wetlands and providing management recommendations. New wetland rating system for western Washington. Improvement of local government wetland regulations.	DOE-08	15
<b>DEPARTMENT OF TRANSPORTATION</b>			
Implement watershed-based strategies for environmental mitigation, flood management and compliance with environmental permits. Provide support for the department's alternative mitigation actions; support the use of the Advance Environmental Mitigation Revolving Account.	Partnerships with local interest groups to integrate department's mitigation needs into watershed recovery strategies. Strategies and guidance to reduce flood hazards and provide emergency response to floods to guide department's protection of salmon. The Advance Environmental Mitigation Revolving Account will be fully capitalized at \$10 Million.	DOT-04	16
Provide technical support for project coordination and recovery planning. Coordinate with the department's regions, ferries, rail, Highways and Local Programs, Operations and Design, and the Environmental Affairs Office to address project delivery in response to proposed listings under the Endangered Species Act (ESA). Develop a pilot mapping and field identification system for roadside areas that contain threatened and endangered salmon, animals and plants; sensitive groundwater recharge areas; public water supplies; and other sensitive areas.	Atlases produced for each maintenance project showing sensitive aquatic areas within 300 feet of highway right-of-way and well location data.	DOT-04	17
<b><u>MFH-3 State and Federal Planning, Regulatory and Proprietary Practice</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Convene Fish and Wildlife area habitat biologists and local government shoreline and critical areas ordinance regulatory staff to discuss and agree upon consistent review criteria and standards for shoreline armoring and alternative treatment projects.	A document outlining the areas of agreement on standards of review, mitigation requirements, sequencing and interjurisdictional issues.	PSAT-01	18

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>MFH-4</u>    <u>Habitat Accounting</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Develop and track programmatic and environmental measures of the Marine and Freshwater Habitat Program for reporting progress on the management plan goal of a net gain in habitat acreage and function.	A report on habitat accounting from data collected on agency permit tracking, acquisition and restoration projects, and estimates of mitigation success from programmatic reviews of permitting programs.	PSAT-01	19
<b><u>MFH-4.1</u>    <u>State Agency Habitat Accounting</u></b>			
<b>DEPARTMENT OF NATURAL RESOURCES</b>			
Continue to protect wetland sites in the Puget Sound trough.	Site visits by regional personnel and volunteers to Daily Prairie, Kings Lake Bog, Snoqualmie Bog and Bald Hills Lake and other sites. Increased level of hydrologic monitoring at these sites and assessment of wetland functions using Ecology's Wetlands Functions and Values Assessment Protocol.	DNR-02	20
<b><u>MFH-5</u>    <u>Improved Science</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Compile and evaluate case studies of existing methods for protecting marine shorelines. Document alternative bank protection methods.	An updated report on alternative bank protection methods for marine shorelines as an interagency discussion document.	PSAT-04	21
Participate in the Nearshore Science Team of the Puget Sound Nearshore Ecosystem Restoration Project. Act as lead in developing and implementing a communications plan for the project in cooperative venture.	Technical assistance in producing a nearshore conceptual model, guiding ecological principles and a data management program to facilitate Puget Sound wide nearshore habitat protection and restoration. Public information with a consistent message among partners through printed materials, presentations, web site, listserv, and media releases.	PSAT-04	22
<b><u>MFH-7</u>    <u>Preserve and Restore Marine and Freshwater Habitats</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Develop new policies and guidance to improve the effectiveness of wetlands compensatory mitigation.	Guidance document on mitigation techniques, such as enhancement, and a revised guidance document on what should be included in a mitigation plan, resulting in improving compensatory mitigation actions.	DOE-08	23
<b>DEPARTMENT OF TRANSPORTATION</b>			
Monitor wetland sites that were developed to mitigate the impacts of transportation projects.	Use of monitoring data to ensure permit compliance. Monitoring results incorporated into the design and implementation of new wetland mitigation projects to improve site performance.	DOT-03	24

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>DEPARTMENT OF TRANSPORTATION</b>			
Support administration of and standardized design for the department's barrier removal projects and grant programs. Participate on the Interagency Review Team for Salmon Restoration. Implement projects to remove barriers to fish passage identified in an existing inventory prepared by the Department of Fish and Wildlife. Accelerate implementation of barrier removal projects.	Removal of barriers to fish passage associated with state roads. Use of a statewide database to track barriers to fish passage. Technical assistance on fish passage projects to local entities and department regions.	DOT-04	25
<b>PUGET SOUND ACTION TEAM</b>			
Participate in the Pacific Coast Joint Venture steering committee and facilitate the development of partnerships in local and regional habitat acquisition and restoration projects.	Technical assistance in 15 new habitat acquisition or restoration projects identifying project partners, funding and site technical prescriptions. Report on projects to the national estuarine restoration strategy and tracking and reporting for state and federal accountability programs.	PSAT-03	26
Work in the Puget Sound Nearshore Ecosystem Restoration Project with the departments of Fish and Wildlife, Natural Resources, Ecology, the Army Corps of Engineers, the U.S. Geological Survey, U.S. Fish and Wildlife Service, tribal governments, local governments, the Northwest Straits Commission, the University of Washington, the Salmon Recovery Funding Board, People for Puget Sound and other partners under the state lead of Fish and Wildlife to identify and begin implementing the best opportunities to restore the functions that support Puget Sound's diverse nearshore habitats.	A written framework for protection and restoration of nearshore habitats throughout Puget Sound, criteria for project selection, and an initial evaluation of potential projects.	PSAT-04	27
<b><u>MFH-8</u>      <u>Marine Protected Areas</u></b>			
<b>DEPARTMENT OF FISH AND WILDLIFE</b>			
Collect information on the status of ground fish and forage fish. Add a synoptic trawl survey once per biennium to smooth inter-annual variation of stock survey data. Develop management plans for recovery of depressed ground fish and forage fish stocks. Seek consensus with tribes and other parties on management plans for recovery of depressed ground fish and forage fish stocks, one tool of which may include marine protected areas. Provide technical assistance to Marine Resources Committees to enhance protection of fish stocks. (Budget enhancement requested.)	Updated database of select Puget Sound ground fish and forage fish stocks. Development and public availability of reports. Development of selected stock management plans in coordination with tribal governments and interest groups. Coordinated development of a system of MPA, Marine Reserve, and Marine Sanctuary sites within Puget Sound.	DFW-06	28



STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>PUGET SOUND ACTION TEAM</b>			
Work with the departments of Fish and Wildlife, Natural Resources, Parks, tribal governments, the National Oceanic and Atmospheric Administration, the U.S. Fish and Wildlife Service, the Northwest Straits Commission, non-governmental organizations and others to organize a better-coordinated approach to marine resource protection that ensures greater protection of precious marine resources.	Quarterly meetings among agencies, tribes, the Northwest Straits Commission, academia and non-governmental organizations to discuss and coordinate activities related to the establishment and evaluation of marine protected areas in Puget Sound.	PSAT-04	29

LOCAL GOVERNMENT ACTIONS	Action ID
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## ***SOUNDWIDE***

### **MFH-1      Comprehensive Local Program**

#### **THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:**

Local governments update comprehensive plans, shoreline master programs and ordinances to apply the best available science for protecting water quality and biological resources. Include an inventory used to designate nearshore habitat for shellfish, eelgrass, kelp beds, and forage fish spawning areas as critical areas.

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Protect high value marine or freshwater habitat areas by:

- \* Acquiring lands, easements or development rights that sustain existing habitats and functions important to the community;
- \* Providing for responsible management of acquired lands;
- \* Offering incentives for private preservation and restoration; and
- \* Engaging in restoration of natural processes in partnership with other organizations.

Promote public access sites such as parks, shorelines, and open space, and provide interpretive and active educational programs about the habitat types, the natural processes that sustain it, the economic value of the functions it provides the community, and the diversity of creatures that share the habitat types with people.

Implement and enforce local land use regulations that promote “soft” alternatives to hard shoreline structures such as bulkheads, limit the construction of new levees in floodplains, and protect wetlands.

Participate in assessments and restoration of marine nearshore habitats as part of the Puget Sound Nearshore Ecosystem Restoration Project.

Measure the results of efforts to achieve net gain in ecological function and area of marine and freshwater habitats through tracking and evaluating of permitted habitat losses, habitat restoration, and the effectiveness of mitigation.

# SHELLFISH PROTECTION

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## ***Puget Sound Water Quality Management Plan Goal***

- Protect water quality and prevent contamination of commercial and recreational shellfish beds so shellfish are safe for human consumption.
- Reduce contamination of shellfish beds to achieve a net increase in acreage approved for harvest.
- Prevent human consumption of shellfish from contaminated beds until the contamination is corrected.

## **Strategies for achieving the goals**

- Adopt policies to ensure that pollution-control and land-use programs effectively protect water quality in shellfish areas.
- Respond to existing and potential shellfish contamination with aggressive restoration and protection programs.
- Monitor shellfish areas for bacterial contamination, marine biotoxins and other contaminants.
- Increase public involvement and education related to shellfish protection.

## **Current status of the program**

Puget Sound has some of the finest shellfish habitat in the world, as evidenced by the state's position as the leading producer of farmed shellfish in the country. The harvest of natural and farmed shellfish for commerce, recreation and subsistence is influenced by a number of factors, however, none is more critical than clean water.

The primary measure of water quality for shellfish harvesting is bacterial contamination associated with human sewage and animal wastes. Potential sources of fecal bacteria include municipal sewage treatment plants, on-site sewage systems, farm animals, boater wastes, pets and wildlife.

A century of growth and development in the region has left many areas unsuitable for shellfish harvesting. Since 1980, approximately 25 percent of the Sound's remaining commercial shellfish growing areas have been closed to harvesting. During the 1980s, nearly 33,000 commercial shellfish acres were

downgraded and taken out of production. In the midst of this trend a number of new programs were instituted to protect and restore water quality for shellfish harvesting. This work led to a single upgrade of 1,380 acres in 1989, the first encouraging sign that targeted efforts could effectively clean up contaminated tidelands. In the 1990s, the picture improved significantly as more than 10,000 acres were restored and upgraded, helping to offset continued downgrades in other parts of the Sound.

Since 1980, the region's population has grown by more than 40 percent, and much of the fastest growth is occurring in the Sound's rural, shellfish-rich counties. The larger population is one reason water quality problems are surfacing at more sites around the Sound. The growth trends also underscore the need to shift emphasis away from reactive, short-term fixes to more meaningful pollution prevention and land-use planning to better address the underlying causes of the problems.

The region's growing and changing population presents another challenge in terms of the attitudes and values of the people. People who understand and appreciate the shoreline environment are more inclined to serve as responsible stewards. People also need to be provided access to shorelines and opportunities to harvest shellfish as incentives for helping to keep these areas clean.

Coupled with this is a pressing need for strong local programs. Shellfish protection involves a broad partnership of government agencies and other organizations, but no role is more important than that of local government because of its close relationship with the people and the resource. During the 2003-2005 biennium, many local programs need assistance to build capacity and public support to effectively and permanently protect the Sound's shellfish growing areas.

## **How the shellfish actions address work plan issues and priorities**

Shellfish protection involves a partnership of federal, state, local and tribal governments and numerous other organizations. The work is anchored by strategies to monitor and classify shellfish growing areas, to prevent and control pollution, and to educate and engage people in the use and conservation of the resource. The strategies are carried out through an

integrated approach involving numerous programs of the *Puget Sound Water Quality Management Plan*.

The shellfish protection program retains a strong focus on restoration while placing added emphasis on long-term protection measures associated with land-use planning and pollution prevention. Examples of this include prompt and targeted work in areas threatened by declining water quality, expanded use of low impact development techniques to alleviate stormwater impacts, and use of risk-based approaches to improve sewage management in areas draining to shellfish tidelands.

Long-term protection also requires public education to promote enhanced stewardship on a personal and community scale. An interagency group with local and shellfish industry representation has developed an updated shellfish communications strategy to better address these needs.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

### **How work plan actions support a larger effort**

The shellfish protection program is carried out through a comprehensive strategy involving a broad network of partners and programs. While this is particularly true of efforts to protect water quality and educate people, the monitoring and classification of shellfish beds is also leveraged and enhanced by creative partnerships with local health departments and tribal governments.

The two most important land-use laws for shellfish protection are the state Growth Management Act and the Shoreline Management Act, administered by the Department of Community, Trade and Economic Development and the Department of Ecology, respectively. These laws call on local governments to protect shellfish areas as critical habitats and shellfish harvesting as a priority beneficial use.

Pollution-control programs are carried out primarily through the collaborative efforts of Ecology, local and tribal governments, and community groups such

as watershed management committees. Two approaches receiving significant attention are Ecology's watershed planning process and Water Cleanup plans. Where shellfish resources are potentially affected by activities and land uses on a watershed scale, these tools are equipped to incorporate and directly address shellfish protection objectives.

On the education front, numerous groups and institutions are involved and use a variety of approaches to reach and teach people. Key among these are the universities, K-12 schools, conservation districts, local governments, non-profit organizations, civic groups and businesses. These groups sponsor shellfish festivals, neighborhood workshops, volunteer monitoring programs and other education and outreach activities. The challenge is to nurture and continually renew these programs to reach ever-changing and growing audiences.

Within this framework the funding allocated under this work plan provides capacity for field work, public education, technical assistance and program oversight at both the regional and local level.

### **Next steps beyond this biennium**

The proposed actions reflect the recommendations of the Puget Sound Council.

The actions in this work plan include all the key next steps called for in the *Puget Sound Water Quality Management Plan*.

### **2003-2005 Budget Request for State Actions**

Total Proposed Funding	\$1,723,683
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>SF-2      <u>Protection and Restoration of Shellfish Beds</u></b>			
<b>DEPARTMENT OF COMMUNITY, TRADE AND ECONOMIC DEVELOPMENT</b>			
Work with Action Team staff to identify the best available science necessary to manage the protection of shellfish growing areas.	Continued meetings with Action Team staff and local governments to identify key regulatory and non-regulatory approaches necessary to protect shellfish growing areas	CTED-01	40
<b>DEPARTMENT OF ECOLOGY</b>			
Reduce pollution from land clearing, agricultural and animal-keeping practices by conducting site inspections, participating in shellfish closure response meetings, and issuing enforcement actions as necessary.	Attainment of water quality standards for the commercial or recreational harvest of shellfish in areas affected by contamination from bacteria. Increased number of recreational and commercial growing areas.	DOE-05	41
Through an increased level of cooperation and focus, produce Water Cleanup Plans (TMDLs), Centennial Clean Water projects and Shellfish Closure Response Plans that will include goals, actions, and timelines for reopening of closed shellfish beds. Assist with follow-up responses to the early warning system. Participate on Shellfish Advisory Committee.	Use of information on water quality conditions and trends in shellfish growing areas to assist in ranking water bodies for TMDL assessments. Coordination of the development of water cleanup plans with shellfish closure response plans and other shellfish protection strategies.	DOE-05	42
<b>DEPARTMENT OF HEALTH</b>			
Provide technical assistance on shellfish sanitation and contamination source issues.	Technical assistance to other agencies and stakeholders regarding unique characteristics of shellfish sanitation and potential public health impacts of contamination to other agencies and stakeholders.	DOH-02	43
Provide technical assistance to other agencies and stakeholders to protect and restore shellfish growing areas.	Technical assistance through trainings in monitoring techniques, evaluations of water quality data and pollution sources, and conducting circulation, pollution dispersion and dilution studies.	DOH-02	44
Identify and address water quality declines in shellfish growing areas prior to downgrade in classification. Continue to distribute data and information on growing area sanitation to state agencies, tribal and local governments, shellfish growers, and other stakeholders. Information will include Health actions and fecal coliform trends in all areas identified as threatened with downgrades.	Annual distribution of shellfish growing area reports by April 1. Updates to stakeholders on water quality and pollution sources throughout the year as needed. Distribution of the early warning system information.	DOH-02	45
Continue to monitor water quality, assess pollution sources, identify corrective actions, and classify commercial and recreational shellfish growing areas.	Annual reports for each shellfish growing area showing water quality monitoring results, pollution course evaluations, corrective actions, and review of classification to all agencies that regulate pollution sources or assist in maintaining water quality.	DOH-02	46

## Shellfish Protection

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>DEPARTMENT OF HEALTH</b>			
Identify pollution problems in shellfish growing areas and inform agencies with regulatory authority. Monitor the status of corrective actions to assess their effectiveness.	Information and reports to pollution-control agencies regarding findings of pollution source surveys, as they become available. Water quality monitoring evaluations to determine whether pollution control activities are effective and if closed areas can be reopened for commercial or recreational harvest of shellfish.	DOH-02	47
Participate on interagency committees to coordinate programs and activities associated with the protection and management of shellfish resources.	Information exchange about shellfish area restoration through consultations with tribal, state and local governments, and other stakeholders.	DOH-02	48
Assist in the development and implementation of watershed action plans where the beneficial use of shellfish resources exists or is restorable in the near future.	Watershed plans that include actions to protect or restore the beneficial uses of shellfish resources.	DOH-02	49
Work with the departments of Ecology, Natural Resources and Fish and Wildlife, the State Parks and Recreation Commission, and Action Team staff to cooperatively assess shellfish protection needs, develop closure-response plans, restore water quality and enhance shellfish, and assist in the development and implementation of watershed action plans.	Participation in the development of all closure-response plans per the Memorandum of Agreement with Ecology and the Action Team. Participation in all shellfish water quality restoration and protection projects and in the implementation of watershed plans and Water Cleanup plans where shellfish restoration or protection is a concern.	DOH-02	50
Plan, conduct and coordinate supplemental water quality monitoring, pollution-source investigations, and hydrographic assessments in threatened and downgraded shellfish areas.	Reports and information to assist pollution-control agencies and stakeholders to direct their activities in downgraded and threatened shellfish growing areas.	DOH-02	51
<b>PUGET SOUND ACTION TEAM</b>			
Work with the Department of Health and others to prevent shellfish classification downgrades by taking action to address pollution problems in areas threatened by declining water quality.	Technical assistance for restoration work carried out at all sites identified as threatened under the Department of Health's early warning system.	PSAT-03	52
Complete a study assessing the effects of urbanization on water quality in shellfish growing areas and develop guidance for land-use and pollution-control practices in shellfish watersheds.	Direct distribution of the guidelines to decision-makers and posting on the web for broader distribution. Presentation of the research findings in a peer-reviewed journal article. Presentation of the information in briefings and workshops across the region.	PSAT-04	53

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>PUGET SOUND ACTION TEAM</b>			
Develop guidance for local governments on model shellfish protection programs emphasizing local land use plans and development regulations.	Distribution of the guidance to planners and other decision-makers and posting on the Action Team website for broader, ongoing use and distribution.	PSAT-04	54
<b>UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM</b>			
Provide technical assistance, local coordination and education to protect and restore commercial and recreational shellfish beds in Puget Sound, including education to prevent nutrient and pathogen pollution.	Local community and decision-maker knowledge about actions necessary to reclaim and keep shellfish beds from being downgraded.	UW-01	55
<b>SF-4      <u>Recreational Shellfish Program</u></b>			
<b>DEPARTMENT OF HEALTH</b>			
Implement portions of the recreational shellfish plan. Help local health jurisdictions develop and implement recreational shellfish plans under the recreational shellfish beach regulations, Chapter 246-280 WAC. Provide funding to help local health jurisdictions conduct recreational shellfish activities. Continue classification of recreational shellfish beaches in cooperation with local health jurisdictions.	Contracts with interested Puget Sound local health jurisdictions to conduct biotoxin sampling, public education, and outreach. Monitor contracts through activity reports. Continued recreational beach classification. Continued enhancement of biotoxin web page that provides beach-specific information: biotoxin closures/openings, beach locations and maps, pollution impacts, and pollution closure zones. Immediate closure of public beaches when biotoxin results exceed closure limits.	DOH-03	56
<b>SF-5      <u>Annual Inventory and Information Management</u></b>			
<b>DEPARTMENT OF HEALTH</b>			
Continue to publish and distribute an annual inventory of commercial and recreational shellfish beds.	Development and distribution of Annual Inventory Report of shellfish growing areas, including maps showing each classified commercial and recreational shellfish growing area, on or about June 1 of each year.	DOH-02	57
<b>SF-6      <u>Public Involvement and Education</u></b>			
<b>DEPARTMENT OF HEALTH</b>			
Work with local health jurisdictions, state agencies, and others to inform and educate the public about shellfish issues. Coordinate and facilitate meetings of the Shellfish Advisory Committee to share information and consider recommendations on program activities and enhancements.	Public information and education regarding shellfish issues through brochures, presentations, data sharing, and attendance at community events. Contracts with local health jurisdictions to provide educational materials to the public. Information provided on new biotoxin web page on biotoxin closures, beach locations and maps, pollution-closure zones, beach classifications, recreational harvester education materials and links to related sites. Continued coordination and facilitation of Shellfish Advisory Committee meetings.	DOH-02	58

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>PUGET SOUND ACTION TEAM</b>			
Inventory local outreach and education programs related to shellfish protection and shellfish harvesting to assess capacity, approaches and needs.	Findings distributed to state agencies, local governments and others for follow-up.	PSAT-04	59
Work with partner organizations to carry out priority projects of the updated shellfish communications strategy based on available funding.	Two completed communications projects and periodic meetings for interested organizations.	PSAT-04	60
<b><u>SF-7</u>      <u>Shellfish Closure Response Strategy</u></b>			
<b>DEPARTMENT OF HEALTH</b>			
Cooperate with the Department of Ecology and Action Team staff to continue to implement the Memorandum of Agreement on shellfish-closure response planning.	Coordination of initial meetings of shellfish closure response groups. Support for the development of closure response plans, and water quality and pollution source information pertinent to downgraded shellfish growing areas.	DOH-02	61
<b>PUGET SOUND ACTION TEAM</b>			
Collaborate with the departments of Health and Ecology to respond to shellfish classification downgrades and update the memorandum of agreement for agency coordination of response activities.	Shellfish closure response strategies at all shellfish sites affected by downgrades. Coordination of implementation of these strategies with other relevant plans and local shellfish protection districts. Review and revision as needed of the state agency memorandum of agreement.	PSAT-04	62



LOCAL GOVERNMENT ACTIONS	Action ID
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## ***SOUNDWIDE***

### **SF-2      Protection and Restoration of Shellfish Beds**

#### **THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:**

Local governments design and carry out programs that control pollution, manage land uses and involve and educate residents to protect and restore water quality in shellfish areas. Measures should include:

- \* Comprehensive land use plans and development regulations that prevent and mitigate the effects of development and land use activities on shellfish areas and that designate and protect shellfish areas as natural resource lands and critical areas;
- \* Voluntary and regulatory programs that ensure the proper management of on-site sewage systems, stormwater runoff, farm animal wastes and other nonpoint pollution sources, using higher standards and special sensitive-area designations such as "areas of special concern" as needed;
- \* Targeted strategies to investigate the sources of and to control pollution sources. Strategies should be carried out in partnership with state agencies, tribal governments and other interests, and should respond promptly to early signs of declining water quality and, if necessary, classification downgrades;
- \* Community education and outreach programs that raise awareness and engage residents in the use, conservation and protection of shellfish and shellfish growing areas;
- \* Recreational shellfish plans carried out in partnership with the Department of Health that monitor and classify recreational shellfish beaches and educate residents on safe harvesting practices;
- \* Watershed management plans and water cleanup plans that ensure long-term protection and restoration of shellfish areas; and
- \* Shellfish protection districts, storm and surface water utilities and other funding tools that provide the means to design and carry out programs to protect and restore water quality in shellfish areas.

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# STORMWATER AND COMBINED SEWER OVERFLOWS

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## ***Puget Sound Water Quality Management Plan Goal***

- To protect and enhance the health of Puget Sound's aquatic species and habitat, natural hydrology and processes, and water quality, and to achieve standards for water and sediment quality by managing stormwater runoff and reducing combined sewer overflows.

## **Strategies for achieving the goal**

- Develop and carry out local programs that combine land use and watershed planning and comprehensive stormwater management.
- Maintain minimum technical standards, issue municipal, industrial and construction National Pollutant Discharge Elimination System (NPDES) permits that are consistent with this program; and provide guidance, technical and financial assistance and training.
- Manage runoff on state, federal and tribal government land.
- Achieve the greatest reasonable reduction in combined sewer overflows.
- Conduct cooperative research and disseminate findings.
- Measure progress through performance measures and adjust the program as needed.

## **Current status of the program**

Inadequately managed stormwater runoff and combined sewer overflows (CSOs) continue to threaten the biological health and diversity of Puget Sound. The threat comes from both pollutants transported by stormwater and the increased volume and rate of stormwater runoff from developed land.

Research conducted over the last decade provides extensive evidence that land use decisions play a pivotal role in water quality and ecosystem health. Research also suggests that conventional stormwater management practices cannot adequately protect Puget Sound's aquatic resources. As a result, there is significant interest among the planning and engineering communities in innovative low impact development practices that protect natural hydrologic processes.

Local governments in the Sound have spent considerable resources developing stormwater programs and preventing CSOs. Many, however, still have not developed programs with stable, adequate funding. At least three major drivers may change this: the listing of salmonids under the Endangered Species Act; National Pollutant Discharge Elimination System (NPDES) Phase II Permits; and Total Maximum Daily Load (TMDL) Water Cleanup plans.

The Department of Ecology (Ecology) updated the region's stormwater technical manual in August 2001. Ecology and the Washington Chapter of the American Public Works Association is currently developing a new process for reviewing and approving innovative best management practices.

Ecology has had difficulty reissuing federally mandated stormwater permits. The NPDES Phase I permit expired in July 2000, was administratively extended, and has not yet been reissued. Ecology reissued the Industrial and Construction general permits but they were appealed. U.S. Environmental Protection Agency's (EPA) deadline for issuing the Municipal Phase II Permit (for jurisdictions with populations less than 100,000) is December 2002, and Ecology staff have reported that they will not be able to meet this timeline.

Ecology has approved CSO reduction plans for all 10 jurisdictions in the Sound with combined systems, but monitoring data from local governments is often incomplete.

The Department of Transportation continues to manage highway runoff on new projects according to the highway runoff manual. The department is expected to incorporate the new requirements of the updated Department of Ecology manual into the highway runoff manual in phases. The Department of Transportation continues to conduct research on highway runoff and will participate in a national research project to develop low impact development techniques for highways.

The Puget Sound Water Quality Action Team staff is actively promoting the comprehensive stormwater program in Growth Management Act updates, watershed planning, and is promoting innovative land development and stormwater management techniques through low impact development practices.

During the 2003-2005 biennium, program challenges include issuance of NPDES stormwater permits, technical assistance to all jurisdictions, and maintaining schedules for CSO reduction. Local government updates of growth management plans and watershed plans should incorporate the comprehensive stormwater program from the management plan. In addition, initiatives for research and application of low impact development practices will be encouraged by state agencies in partnership with local jurisdictions.

### **How the Stormwater and Combined Sewer Overflows actions address work plan issues and priorities**

The Stormwater and Combined Sewer Overflows Program addresses several other issues identified in this work plan, including sediment contamination, species at risk, alteration of marine and freshwater habitat, and threats to shellfish harvesting areas.

Pollutants in stormwater contribute to the contamination of sediments in Puget Sound. In addition, alteration or loss of habitat is cited as one factor leading to the decline of salmon in Puget Sound. Managing stormwater quality and quantity to protect habitat and incorporating low impact development measures into land use regulations are components of the recovery strategy for species at risk.

Stormwater pollutants include bacteria that result in shellfish that is unsafe to harvest. So it is important that stormwater from development served by on-site sewage systems be managed to prevent flooding. Public education promotes behaviors to protect stormwater from nonpoint pollution from residences, businesses, and roads throughout the basin.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

### **How work plan actions support a larger effort**

Local governments in Puget Sound devote considerable resources to managing stormwater and combined sewer overflows in their communities. The Department of Transportation reported that during

the 2001-03 biennium, a total of \$36,670,000 was spent by the department on stormwater management in Puget Sound. In the 2003-2005 biennium, Transportation has projected approximately \$3,649,850 in expenditures for stormwater protection in Puget Sound construction projects. Because stormwater runoff from projects can be a concern for habitat protection, the Department of Fish and Wildlife sometimes includes provisions for stormwater management in Hydraulic Project Approvals.

In addition to the funding designated under this work plan, Ecology's Water Quality Program also receives federal funding and permit fees. The department also administers the Water Quality Account, which offers grants and loans to local governments to help them develop and carry out programs. The U.S. Environmental Protection Agency issues NPDES stormwater permits for federal and tribal facilities located in the basin. The University of Washington's Center for Urban Water Resources is the region's leading academic research institution for stormwater management. The funding designated for actions in this work plan supports the Department of Ecology's capacity to provide technical assistance to local governments within this larger framework of activities.

### **Next steps beyond this biennium**

The Puget Sound Council recommends that cooperative research on low impact development be conducted during the 2003-2005 biennium. The Department of Transportation is proposing a research and demonstration study of low impact development practices under a National Cooperative Highway Research Program. The Department of Ecology is not funded to conduct this type of research, but is funding cooperative research by Action Team staff, the University of Washington and Washington State University Cooperative Extension under a grant with funds from Section 319 of the Clean Water Act. While this research is encouraging, funding is limited, and additional funding is needed to carry out cooperative research projects and promote the adoption of low impact development practices for new development and redevelopment in Puget Sound.

### **2003-2005 Budget Request for State Actions**

Total Proposed Funding	\$1,834,697
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**SW-0**      **Activities Reflecting Stormwater and Combined Sewer Overflow Program Goals and Objectives**

**DEPARTMENT OF ECOLOGY**

Provide assistance to local governments, state agencies and other organizations to improve stormwater management. This will include providing Centennial and State Revolving Fund grants and loans, developing data management and modeling tools, and working with other agencies and organizations to maintain current guidance for development of effective and cost efficient stormwater programs.	Current and state-of-the-art guidance provided to communities developing or implementing stormwater control programs. Assessment of new and developing stormwater technologies and posting of information about the technology on Ecology's website. Processing and managing stormwater grants and loans to local governments.	DOE-06	70
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**SW-1**      **Local Government Planning and Stormwater Programs**

**DEPARTMENT OF ECOLOGY**

Administer an enhanced municipal stormwater program within the Puget Sound basin, as well as statewide, which will include education on EPA's Phase II NPDES stormwater rules. Provide technical and financial assistance to cities and counties to help them develop comprehensive stormwater programs, including development manuals, ordinances and education.	Re-issuance of Phase I stormwater permits. Issuance of Phase II stormwater permit. Guidance documents and manuals for stormwater management.	DOE-06	71
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**SW-2**      **Stormwater Technical Manual and Federal Permits**

**DEPARTMENT OF ECOLOGY**

In cooperation with members of the western Washington American Public Works Association, use a recently developed protocol to review and approve new stormwater treatment best management practices.	<ul style="list-style-type: none"> <li>* Hold four technical review committee meetings per year.</li> <li>* Publish results of reviews on Ecology's website.</li> <li>* As appropriate, add approved BMPs to the Stormwater Management Manual for Western Washington.</li> </ul>	DOE-06	72
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**SW-3**      **Guidance, Assistance and Training**

**DEPARTMENT OF COMMUNITY, TRADE AND ECONOMIC DEVELOPMENT**

Work with the Action Team staff and consultant to design a model ordinance for clearing and grading that will address appropriate pre-construction and post-construction site development best management practices and vegetation removal and restoration requirements, including low impact development measures. This code will include guidance for incorporating stormwater provisions for those jurisdictions that may wish to do so.	A Model Clearing and Grading Ordinance that can be easily adapted to local conditions.	CTED-01	73
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>DEPARTMENT OF TRANSPORTATION</b>			
Continue to train department contractors, agency personnel and local governments to control erosion and manage spills.	Improved knowledge concerning erosion control and spill management requirements among construction site personnel through on-site training sessions and updating or creation of new training manuals and procedures. Implementation of erosion control contractor certification program.	DOT-01	74
<b>PUGET SOUND ACTION TEAM</b>			
Convene a broad-based committee to assess current training opportunities for local government staff, the building community, and others on stormwater management techniques. Make recommendations to the Puget Sound Council and Action Team on the need for additional training for these groups.	Stakeholder consultation and recommendations for changes that reflect provisions of the Puget Sound Water Quality Management Plan.	PSAT-03	75
Promote greater understanding and use of low impact development (LID) practices in Puget Sound. Provide technical assistance, guidance and educational materials, case studies and other information to local governments, the development and engineering communities, environmental and citizen groups, and others. It is hoped that at least two local governments will revise their regulations to allow for LID, numerous LID practices will be used at a variety of new developments, and at least one demonstration project will be completed that incorporates multiple LID practices.	Two to four electronic newsletters on LID, a book of LID case studies in Puget Sound and a bioretention "rain garden" book. Development and broad distribution of new information on LID practices through a state/federal grant. Sharing of information learned from LID demonstration sites. Assessment of the need for additional training workshop(s), and at least one workshop, as needed.	PSAT-03	76
Work with Ecology, Community, Trade and Economic Development, and Fish and Wildlife to develop additional guidance materials and provide technical assistance to help local governments develop comprehensive stormwater programs.	Guidance documents on two elements of the local, comprehensive stormwater program. Direct technical assistance to 75 percent of all local governments in Puget Sound.	PSAT-03	77
Convene interagency coordination meetings to coordinate regional assistance to local governments on stormwater and land use planning.	Six interagency meetings to better coordinate stormwater technical assistance and educational efforts to local governments.	PSAT-04	78
<b><u>SW-4 Stormwater Runoff from State Highways</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Work with the Department of Transportation to provide effective guidance and measures to reduce and control highway runoff and meet NPDES requirements.	Revised DOT highway runoff manual to be equivalent to Ecology's manual. Reduction of water quality impacts from highway runoff.	DOE-06	79

## Stormwater and Combined Sewer Overflows

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>DEPARTMENT OF TRANSPORTATION</b>			
Examine the applicability of existing and conceptual low impact development (LID) technologies to linear transportation systems. Develop practical design standards and practices that meet identified regulatory requirements and resource protection goals. Use the conceptual designs in demonstration pilot projects to evaluate design and construction issues, determine the cost and environmental benefits, and optimize LID techniques for transportation. Project to be accomplished in conjunction with Maryland Department of Transportation.	A "white paper" detailing applicable LID practices for linear transportation systems that can be used by transportation agencies to determine whether LID is suitable for their particular climate, regulatory mandates, and projects. A series of conceptual design standards for practical field evaluation and optimization. A series of documented construction techniques, performance data, technical limitations, further research needs, maintenance protocols, and design guidance, standards and specifications.	DOT-01	80
Support research related to stormwater treatment, bioengineering, erosion and sediment control, including coagulants for detention ponds, soil additives to prevent erosion, cost- benefit analysis, ultra-urban (confined space) technologies and infiltration methods.	Reports from research projects, improving knowledge base and technology designs for stormwater treatment, erosion control and bioengineering practices.	DOT-01	81
Mitigate the impacts of stormwater runoff for all new transportation construction projects that add more than 5,000 square feet of impervious surface. Provide roadside maintenance for existing stormwater management facilities. Treat existing impervious surface flows when practicable as specified in the Puget Sound Highway Runoff Manual.	Mitigation of water quality impacts for all new transportation projects. Stormwater management practices maintained at existing facilities to maximize the efficiency of water quality treatment.	DOT-01	82
Monitor compliance with National Pollutant Discharge Elimination System (NPDES) stormwater requirements and stormwater utility fees.	Stormwater control best management practices monitored to ensure that all permit requirements are met, including payment of fees.	DOT-01	83
Work with the Department of Ecology to revise the 1995 Highway Runoff Manual.	Once adopted, the revised manual will operate as WSDOT's equivalent to the Department of Ecology's Stormwater Management Manual.	DOT-01	84
Work collaboratively with the Department of Ecology to develop the conditions of the NPDES permits and its schedule for compliance. Secure the necessary resources to meet the department's permit obligations.	Department of Ecology issuance/reissuance of NPDES permit(s).	DOT-01	85
Implementation of watershed-based mitigation model development in conjunction with Transportation Permit Efficiency and Accountability Act (ESHB 6188) with cooperation of federal, state, and local governments, local watershed groups, business associations, environmental groups, and others.	Development and testing of a methodology for addressing the environmental impacts of transportation corridor development on a watershed basis. System refined and tested.	DOT-04	86

## Stormwater and Combined Sewer Overflows

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>SW-7      Research</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Work with a broad-based committee to assess research needs related to stormwater management and low-impact development. Make recommendations to the Puget Sound Council and Action Team. Work with committee to identify means of sharing research findings.	Assessment of and report on research needs to the Council and Action Team. Periodic sharing of research findings, as appropriate.	PSAT-04	87
<b>WASHINGTON STATE UNIVERSITY, COOPERATIVE EXTENSION</b>			
Encourage the use of low impact development strategies through assisting with the development of low impact development techniques that are appropriate in the Puget Sound basin and educating key audiences.	Assistance to identify research needs and demonstration projects for implementation of low impact development practices. Education for developers and real estate professionals through training programs on the rationale and techniques for low impact development.	WSU-01	88



## LOCAL GOVERNMENT ACTIONS

Action  
ID

### SOUNDWIDE

#### **SW-1** **Local Government Planning and Stormwater Programs**

#### **THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:**

Local governments:

- \* Develop and carry out comprehensive stormwater management programs.
- \* Implement policies and rules, established through Growth Management Act planning to manage stormwater runoff and protect aquatic resources by specifying appropriate locations for and approaches to land development and redevelopment.
- \* Carry out plans to reduce sewage discharges from combined sewer systems.
- \* Seek funding to research, demonstrate and educate on low impact development practices.

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Every city and county should develop and carry out a comprehensive stormwater management program. Programs will vary among jurisdictions, depending on the jurisdiction's population, density, threats posed by stormwater, and results of watershed planning efforts. Cities and counties are encouraged to form intergovernmental cooperative agreements in order to pool resources and carry out program activities most efficiently.

A comprehensive program includes the following elements:

- \* Stormwater controls for new development and redevelopment, including ordinances requiring the use of best management practices and the adoption and use of the department of Ecology's stormwater manual or an approved alternative.
- \* Site plan review to ensure that stormwater control measures are adequate and consistent with local requirements.
- \* Regular inspections of construction sites by local inspectors with erosion and sediment control practice training.
- \* Regular maintenance of all permanent public and private stormwater facilities.
- \* Activities to control sources of pollutants from new development and redevelopment projects and from existing developed lands.
- \* Adoption of ordinances and enforcement measures that prohibit illegal dumping and illicit discharges, activities to detect, eliminate and prevent illicit discharges, and a program to respond to and enforce laws related to spills and water quality violations.
- \* Identification and ranking of existing problems that degrade water quality, aquatic species and habitat, and natural hydrologic processes.
- \* Education and involvement of citizens, businesses, elected officials, developers, builders and other members of the community to build awareness and understanding of stormwater and water quality issues.
- \* Adoption of ordinances that allow and encourage low impact development practices.
- \* Participation in watershed or basin planning processes.
- \* Stable, ongoing local funding capacity, such as a utility.
- \* Monitoring program implementation and environmental conditions and trends over time.
- \* Implementation schedule with specific target dates and funding sources to help plan program activities.



# MUNICIPAL AND INDUSTRIAL DISCHARGES

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## ***Puget Sound Water Quality Management Plan Goal***

- To achieve comprehensive improvement in the control of toxic and other pollutants discharged into Puget Sound by industrial and municipal dischargers, thus reducing and eventually eliminating harm from such contaminants entering or accumulating in the Sound.

## **Strategies for achieving the goal**

- Adopt and, as needed, revise water and sediment quality standards.
- Require that all waste discharge permits include the monitoring requirements and limitations on toxicants and other pollutants of concern which are appropriate to the permit.
- Develop the tools needed to make these permit improvements, including the permit writers' manual, data management, lab support, quality assurance and technical assistance and training.
- Strengthen pretreatment.
- Inspect permitted discharges and take enforcement actions for violations of discharge permits.
- Discover and control unpermitted discharges.

## **Current status of the program**

Washington has adopted water and sediment management standards for Puget Sound. Many of the rivers and streams draining to Puget Sound fail to meet water quality standards. In marine waters, many areas suffer from contaminated sediments. Water quality standards are currently being revised.

The Department of Ecology and the U.S. Environmental Protection Agency (EPA) issue permits to municipal and industrial dischargers. Ecology's permit tracking system lists more than 700 permits in the Puget Sound basin, covering discharges to surface waters and to the ground. Treatment provided by permitted dischargers is generally good, as evidenced by the fact that many water quality problems are attributed to nonpoint discharges.

Permits expire every five years. Because of workload and resource constraints, Ecology has become very selective in re-issuing permits and administratively

extends other permits unchanged. Ecology also inspects facilities and tracks monitoring reports submitted by dischargers.

Because many surface water segments do not currently meet water quality standards, special water cleanup plans must be developed that include what the federal Clean Water Act calls a Total Maximum Daily Load (TMDL) for the contaminant that exceeds standards. These Water Cleanup plans identify specific reductions in discharges necessary for the water segment to meet standards.

## **How the Municipal and Industrial Discharges actions address work plan issues and priorities**

Poorly treated wastewater can cause sediment contamination. This program contributes to sediment cleanup by preventing additional sediment contamination. Addressing water quality that has been degraded by pollutants from wastewater will also contribute to the recovery of species at risk and to improved marine and freshwater habitat.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

## **How work plan actions support a larger effort**

When the *Puget Sound Water Quality Management Plan* was first adopted, Ecology was already administering the water quality program, including standards and permits. Since then, some budget increases have been tracked through the management plan and reported in work plans. This is only part of the total funding necessary to protect Puget Sound through this program. EPA issues permits to federal and tribal facilities in Puget Sound. Additional resources provided by tribal and local governments, as well as private facilities, are used to comply with permits and meet water quality standards.

### **Next steps beyond this biennium**

The Puget Sound Council recommended that individual wastewater permits add appropriate conditions to eliminate further contamination where sediment contamination is found. Ecology will do so in the normal course of issuing new permits. A key next step called for in the management plan that was not proposed by Ecology due to budget constraints and competing priorities is amending the Puget Sound Sediment Management Standards to incorporate human health considerations.

### **2003-2005 Budget Request for State Actions**

Total Proposed Funding	\$3,826,188
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**P-0 Activities Reflecting Municipal and Industrial Discharges Program Goals and Objectives**

**DEPARTMENT OF ECOLOGY**

Implement an effective wastewater discharge permit program. Core program elements include permitting, compliance assurance, enforcement, technical assistance, inspections, monitoring, pretreatment, stormwater, public involvement, pollution prevention, and developing and maintaining systems and procedures for efficient and consistent implementation. Implement industrial stormwater general permit issued August 21, 2002.	Inspection of both major and minor facilities based on environmental criteria. Major facility inspections will be counted at a 2:1 ratio to minor facilities. At a minimum, Ecology inspection of the equivalent of all major facilities each year. Issuance of NPDES and state waste discharge permits (on a modified five-year cycle) in scheduled watersheds and according to environmental priorities. Additional permit efficiencies giving priority to keeping all permits environmentally current while reducing unnecessary paperwork. Reduction of the backlog rate of expired permits to below 10 percent. Integration of permits with the Total Maximum Daily Load program.	DOE-02	90
Conduct a comprehensive water quality assessment that identifies waters not meeting water quality standards, as well as other categories of water quality status. Establish priorities and schedule the development of water cleanup plans--Total Maximum Daily Loads (TMDLs) for waters not meeting standards. Complete TMDLs according to the 15-year schedule. Develop implementation plans for completed TMDLs; track implementation and progress towards meeting the standards.	<p>A final list of water quality assessment categories (including final 303(d) list) approved by EPA in Fall 2003 that lists categories of waters for: 1) waters that meet tested standards, 2) waters of concern, 3) water where no data exists, 4) impaired waters that already have a TMDL or other pollution control plan in place, and 5) impaired waters that result in the 303d list. Report to the Action Team on impaired waters located in Puget Sound, including the parameter(s) impairing each waterbody.</p> <p>Submittal of 50 TMDLs per year to EPA for approval (approximately 50 percent located in Puget Sound watersheds). Work with the Action Team support staff to provide residents information on what the 303(d) list is and how TMDLs are developed and implemented to improve water quality, including using publications such as "Sound Waves" for this purpose.</p>	DOE-02	91



# CONTAMINATED SEDIMENTS AND DREDGING

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## ***Puget Sound Water Quality Management Plan Goal***

- To reduce and ultimately eliminate adverse effects on biological resources and humans from sediment contamination throughout Puget Sound by reducing or eliminating discharges of toxic contaminants and by capping, treating or removing contaminated sediments.

## **Strategies for achieving goal**

- Classify sediments that cause adverse biological effects and significant human health risks.
- Implement Soundwide controls on sources of contaminants causing sediments to fail the sediment standards.
- Provide rules and sites for disposal of dredged materials.
- Expand the urban bay program to provide for additional source control and consideration of cleanup actions for existing areas of high sediment contamination levels.

## **Current status of the program**

During the last 150 years, people have released a wide range of toxic chemicals to the air, water and ground. Over time, many of these chemicals end up in Puget Sound. Unfortunately, some of them become bound to sediments and build up on the bottom of Puget Sound, especially in urban bays like Elliott Bay and Commencement Bay. Significant efforts have been made over the past 30 years to control releases of toxic chemicals. Efforts to further control sources of contamination are included in other programs in this work plan.

The Contaminated Sediments and Dredging program addresses managing dredging projects so that contaminated sediments are separated and safely handled and identified. It also addresses remediating sediment hot spots.

The Dredged Materials Management Program (DMMP) grew out of the earlier Puget Sound Dredged Disposal Analysis (PSDDA). A cooperative state and federal program, the DMMP manages open-water disposal sites for clean dredged material and administers sampling and test requirements to identify contaminated sediments, which must be treated or disposed of in a way that protects the

marine ecosystem. During the 2000 dredging year, 84 percent of the volume of dredged material fully reviewed by DMMP was suitable for open water disposal. In 2001, 94 percent was suitable. Studies carried out under past and current work plans have shown that treatment of contaminated sediments is feasible and affordable.

The Department of Ecology maintains a database of sediment contamination in Puget Sound. Based on 2001 data, Ecology has identified 122 contaminated sediment sites. These sites cover an estimated 3,400 acres. A separate study that uses different methods recently estimated that 8,700 acres (1.5 percent) of soft sediment in Puget Sound show elevated concentrations of chemicals, altered benthic populations and/or toxicity in bioassays. Contaminated sediment hot spots are being remediated through state and federal Superfund programs. Unfortunately, it takes many years for those processes to clean up each site.

Public agencies share financial liability for many sediment cleanup sites, either because public land is involved, because releases were from public sources or because no other responsible parties can be identified. Funding the public share of sediment cleanups is an ongoing problem.

## **How the Contaminated Sediments and Dredging actions address work plan issues and priorities**

The actions in this program will address contaminated sediments and carry out several recommended actions. Cleaning up contaminated sediments in Puget Sound will benefit species at risk and marine habitats of all species.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

## **How work plan actions support a larger effort**

Many of the efforts of federal, state and local agencies to manage dredged material and clean up

contaminated sediments have not been funded through the work plan. The activities in this program provide interagency coordination and technical standards. The funding shown in the work plan is only part of what these agencies spend to manage dredging material. Federal and state Superfund programs fund studies leading to remediation, which is often funded by public and private parties.

### **Next steps beyond this biennium**

Two actions recommended by the Puget Sound Council were not proposed by the respective agencies due to budget constraints, competing priorities, or other barriers. The Department of Natural Resources and other public entities with sites did not propose remediation of contaminate sediment sites on state lands. In addition, Action Team staff, Ecology, Natural Resources, and Fish and Wildlife did not propose actions to integrate sediment cleanup into marine and estuarine shoreline habitat planning and restoration. The actions in this work plan include all the key next steps called for in the management plan, but the pace of cleanup is slow.

### **2003-2005 Budget Request for State Actions**

Total Proposed Funding	\$1,343,300
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>S-0      Activities Reflecting Contaminated Sediment and Dredging Program Goals and Objectives</u></b>			
<b>DEPARTMENT OF TRANSPORTATION</b>			
Continue to support restoration activities in Eagle Harbor, including monitoring of eelgrass plantings and estuary restoration related to the Eagle Harbor Superfund Site. Develop contingency plans for spills at Washington State Ferry sites and during highway projects. Sample sediment at ferry terminals.	Implementation of spill management plans to improve prevention and response to accidental spills implemented. Sediment sampling at selected ferry terminals. Annual monitoring of the performance of habitat restoration projects.	DOT-02	95
<b><u>S-1      Sediment Program Policies</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Follow established policy to continue sediment Total Maximum Daily Loads (TMDL) coordination with water quality program for 303(d) impaired water bodies list.	Updated 303(d) list by removing or adding sites due to change in sediment impact.	DOE-07	96
<b>DEPARTMENT OF TRANSPORTATION</b>			
Develop and implement programs to reduce and control the impacts of toxic compounds on sensitive habitats associated with transportation projects.	Implementation of strategies to control sources, clean up contamination, and repair damages to natural resources resulting from the release of toxic compounds into the environment. Integration of statewide strategies into highway and ferry transportation projects. Funding mechanisms for the cleanup of contaminated sediments, particularly those surrounding ferry terminals. Statewide strategies to integrate the cleanup of toxics with watershed planning. An additional 14.0 million board feet of creosote-treated timber removed over the next 10 years at 13 ferry terminals.	DOT-02	97
<b><u>S-2      Program for Unconfined Open-Water Disposal</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Work with the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the state department of Natural Resources to continue to manage open-water disposal of dredged material, including making permit decisions, and managing and monitoring disposal sites through the Dredged Material Management Program.	Continued availability of open-water disposal sites that meet adopted environmental goals. One program annual review meeting each year. Dredging and disposal proposals reviews and technical program updates as needed.	DOE-07	98
<b><u>S-3      Confined-Disposal Standards for Sediments</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Identify contaminated sediment sites and publish on the Confirmed and Suspected Contaminated Sites list for use by organizations and the public.	Annual updates and published list of contaminated sediment sites available on the internet.	DOE-07	99

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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#### **S-4 Multi-User Disposal or Treatment of Contaminated Sediments**

##### **DEPARTMENT OF NATURAL RESOURCES**

Act as lead agency to develop a program utilizing existing upland disposal capacity and sediment treatment technology per advice in a state and federal co-sponsored study of contaminated sediment disposal options.	Adoption of a reliable, predictable, and cost competitive alternative to confined aquatic disposal of sediment unsuited for open water disposal.	DNR-04	100
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##### **DEPARTMENT OF ECOLOGY**

Work with the U.S. Army Corps of Engineers, the Environmental Protection Agency, the state department of Natural Resources, the Washington Public Ports Association, the U.S. Fish and Wildlife Service and the Action Team staff to respond to the final recommendations for a multi-user disposal site (MUDS) or treatment facility in Puget Sound.	Agency comments to the final MUDS recommendation and cost-tracking of contaminated sediment disposal.	DOE-07	101
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#### **S-6 Investigations and Cleanup of Contaminated Sediments**

##### **DEPARTMENT OF ECOLOGY**

Work with the state departments of Transportation and Natural Resources; Action Team staff; the Environmental Protection Agency; and the U.S. Army Corps of Engineers to continue to coordinate policies for cleaning up sediments as part of the Cooperative Sediment Management Program.	Uniform and complementary policies among agencies as a result of communication regarding each others' activities.	DOE-07	104
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Work with the departments of Transportation and Natural Resources; Action Team staff; the Environmental Protection Agency; the U.S. Army Corps of Engineers; and other federal, tribal, state and local governments to continue to carry out the Bellingham Bay Demonstration Pilot Project to clean up contaminated sediments and restore and enhance aquatic habitats.	Cleanup, treatment and disposal, as appropriate, of contaminated sediments within Bellingham Bay. Cleanup may be completed in the 2004 to 2006 time period.	DOE-07	105
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##### **DEPARTMENT OF TRANSPORTATION**

Work with the state departments of Ecology and Natural Resources, Action Team staff; the Environmental Protection Agency, and the U.S. Army Corps of Engineers to continue to coordinate policies for cleaning up sediments as part of the Cooperative Sediment Management Program.	Uniform and complementary policies across agencies by communication of each agency's respective activities.	DOT-02	106
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Work with the departments of Ecology and Natural Resources, Action Team staff, the Environmental Protection Agency, the U.S. Army Corps of Engineers, and other federal, tribal, state and local governments to continue to carry out the Bellingham Bay Demonstration Pilot Project to clean up contaminated sediments and restore and enhance aquatic habitats.	Pilot project results will be monitored.	DOT-02	107
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**S-7**      **Measuring Program Effectiveness**

**DEPARTMENT OF ECOLOGY**

Continue to clean up priority contaminated sediment sites.	An updated list identifying the status of cleanup activities for contaminated sediment sites. Contaminated sediment sites will be cleaned up according to priority status.	DOE-07	108
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**PUGET SOUND ACTION TEAM**

Collect information on sediment hot spots and track progress of cleanup actions. Participate in cleanup actions as appropriate.	Compilation of information on sediment cleanups with delays highlighted.	PSAT-04	109
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# NONPOINT SOURCE POLLUTION

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## ***Puget Sound Water Quality Management Plan Goal***

- To reduce and ultimately eliminate harm from nonpoint sources of pollution to Puget Sound, including pathogens, toxic contaminants, sediment and nutrients.

## **Strategies for achieving the goal**

- To build on previous watershed planning efforts to integrate water quality and habitat issues through cooperative watershed planning and implementation processes.
- To provide technical and financial assistance and incentives to local governments for controlling and preventing nonpoint pollution.
- To develop or enhance state programs or regulations for those nonpoint sources that are most effectively controlled at the state level.

## **Current status of the program**

Nonpoint pollution originates from a variety of diffuse sources related to human land uses. Cumulatively, nonpoint pollution can introduce significant quantities of pollutants into waterways. Failing on-site sewage systems, poor agricultural and forest practices, improper disposal of household hazardous waste, and sewage discharge from boats are some nonpoint pollution sources, as is runoff from urban and rural lands.

The Nonpoint Source Pollution program is an umbrella program for the On-site Sewage Systems, Forest Practices, Agricultural Practices, Local Watershed Action, Marinas and Recreational Boating, Household Hazardous Waste, and Pest Management programs in the *Puget Sound Water Quality Management Plan*. While the management plan's stormwater program also addresses nonpoint pollution, it is not included under the Nonpoint Source Pollution program because it also addresses combined sewer overflows, which are not classified as nonpoint pollution because they are discharged from sewer treatment system outfalls.

Cities and counties regulate land use for about 65 percent of the land in Washington State. Managing sources of nonpoint pollution, especially those associated with urbanization, depends largely on local land use planning and capital facilities

investments. Local governments are encouraged to use their authority under the state's Growth Management Act to protect the waters of the Puget Sound basin from the effects of nonpoint pollution.

At the state level, the Department of Ecology oversees implementation of the state *Water Quality Plan to Control Nonpoint Source Pollution* and leads an interagency Nonpoint Work Group to coordinate technical and financial assistance. The emphasis of the state management plan is on local planning and implementation. The plan addresses the relationship and coordination of a number of related watershed planning activities. They include:

- Local watershed action planning carried out under the nonpoint rule (Chapter 400-12 WAC) to prevent and correct water pollution from nonpoint pollution sources and to protect and restore habitat.
- Water quality, water quantity and aquatic habitat planning, carried out under the state's Watershed Planning Act (Chapter 90.82 RCW).
- Protection and restoration of the water quality and biological diversity of Puget Sound through implementation of the *Puget Sound Water Quality Management Plan* under the Puget Sound Water Quality Protection Act (Chapter 90.71 RCW).
- Water cleanup planning as required by the federal Clean Water Act to set limits on pollutants discharged to water bodies that have violated state water quality standards, including those pollutants that originate from nonpoint sources.
- Salmon habitat protection and restoration under the state's Salmon Recovery Act (Chapter 75.46 RCW).

## **How the Nonpoint Source Pollution actions address work plan issues and priorities**

As an umbrella program, the Nonpoint Source Pollution Program addresses a number of issues and priorities identified in this work plan. Nonpoint pollution threatens marine and freshwater habitat and poses risks to salmon, ground fish, forage fish and other species at risk. Coordinated state and local programs will protect and restore water quality,

preserve marine and freshwater habitat and minimize risks to salmon, ground fish, forage fish and other species at risk.

Shellfish protection priorities are addressed through a number of related management activities that are described under the On-site Sewage Systems, Agricultural Practices, and Marina and Recreational Boating programs.

The Nonpoint Source Pollution program also addresses contaminated sediments and stormwater issues, as many of the metals, oils and other pollutants are washed off highways and into streams and ultimately, into Puget Sound. Although nonpoint pollution is from diffuse sources, it has a significant cumulative effect, so that where sources are multiplied by growth, public education is critical to reducing nonpoint pollution.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

### **How work plan actions support a larger effort**

The activities of Action Team agencies, Washington State University Cooperative Extension and the Governor's Council on Environmental Education in implementing the nonpoint source pollution plan all contribute to a larger effort to prevent and correct nonpoint pollution. Federal agencies, local governments, citizen groups and private industry provide both regulatory and non-regulatory programs. The efforts of many individual citizens in changing their own behaviors and those of their neighbors continue to make a difference.

Statewide initiatives for local governments for watershed planning; salmon recovery; the Agriculture, Fish and Wildlife; and Timber, Fish and Wildlife processes; and growth management all integrate elements of the nonpoint source pollution program. The federally funded Northwest Straits Conservation Initiative, the U.S. Environmental Protection Agency, the U.S. Geological Survey and other federal agencies contribute to the larger effort. The funding designated in this work plan for

Ecology's coordination and implementation of the nonpoint plan results in collaboration among state agencies and coordination between the statewide nonpoint plan and the *Puget Sound Water Quality Management Plan*.

### **Next steps beyond this biennium**

Next steps in programs under the nonpoint source pollution program are addressed in individual sections for agricultural practices, local watershed action, marinas and recreational boating, and on-site sewage systems.

### **2003-2005 Budget Request for State Actions**

Total Proposed Funding	\$858,767
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**NP-0**      **Activities Reflecting General Nonpoint Program Goals and Objectives**

**DEPARTMENT OF ECOLOGY**

Provide technical and financial assistance to local and tribal governments on effective programs to control nonpoint sources of pollution. Provide compliance and enforcement support as appropriate.	Adoption of local nonpoint control programs into the state's nonpoint plan through a yearly update of Water Quality Summaries of the 62 Water Resource Inventory Areas (WRIAs) of Washington State, including 19 WRIAs in Puget Sound, in Appendix A of the state Nonpoint Plan. Implementation of plans and nonpoint source control programs by local and tribal governments. Continued tracking of Ecology-funded nonpoint projects in order to document water quality benefits.	DOE-04	115
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Coordinate the implementation of "Washington's Water Quality Management Plan to Control Nonpoint Source Pollution." Participate on and coordinate the State Agency Nonpoint Source Workgroup.	Implementation of specific actions in the Nonpoint Plan assigned to Ecology. Coordination of nonpoint programs across agencies. An annual report on activities to implement the nonpoint plan for all agencies, including a section on how water quality improvements have been made through control of nonpoint sources.	DOE-04	116
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**PUGET SOUND ACTION TEAM**

Participate in the State Agency Nonpoint Work Group and implement actions assigned.	Attendance at two meetings annually and participation in the Direct Implementation Funding selection process. Annual reports to Ecology on task implementation.	PSAT-04	117
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# ON-SITE SEWAGE SYSTEMS

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## ***Puget Sound Water Quality Management Plan Goal***

- To protect the Puget Sound's water quality, shellfish growing areas and other aquatic resources from wastes generated by on-site sewage systems.

## **Strategies for achieving the goal**

- Establish comprehensive programs at the local level for the appropriate application of on-site sewage treatment and disposal technologies, and for effective operation, maintenance, inspection, education, and financial and technical assistance regarding on-site sewage systems.
- Provide effective state oversight, regulation and financial and technical assistance.
- Investigate, review, approve, promote and apply, as appropriate, alternative technologies for on-site sewage treatment.

## **Current status of the program**

The on-site sewage system management field is in the midst of a two-pronged revolution: a revolution in thinking about the way on-site systems are used as an element of community infrastructure and a revolution in the kinds of system components that are commercially available. Evidence developed during the last decade and reported to Congress by the U.S. Environmental Protection Agency in 1997 caused a major change in policy regarding these systems. Instead of being considered temporary, marginally functional devices to be used until centralized sewerage facilities are installed, they are now seen as effective, permanent infrastructure. During the same period, technological advances have brought to the market a wide assortment of component devices designed to improve system performance. Conveying the impact of these changes to the local community and at the household level has presented a significant challenge.

Use of on-site sewage systems as permanent community infrastructure requires consideration of their management. Previously, regulation of their design, construction, and operation was considered satisfactory community oversight. In 1995, the Department of Health adopted regulations that envisioned the need for continuing maintenance. Since 1995, local health jurisdictions have evolved their programs to support the permanent use of on-

site systems in broader portions of their communities. Public education has been the primary focus of these efforts, although some jurisdictions have partnered with utility districts and private industry to initiate management elements.

At the same time, manufacturers have combined research, new materials, design innovations, and computer technology to develop products intended to accommodate site limitations, provide higher quality effluent, and facilitate system monitoring. With limited resources for testing and evaluation, the Department of Health has struggled to respond to requests for product approval and guidance documents needed to bring consistency in the use of these products throughout the region and state. Much of the challenge stems from the inherent conflict between the existing prescriptive nature of the state regulation (Chapter 246-272 WAC) and the performance-based design of many of the new products.

The Department of Health has responded to these challenges with several actions. Through its Technical Review Committee, the Department of Health approved several proprietary system components and produced guidance documents to promote consistency in the regulation of these products at the local level. The Department of Health has provided technical assistance to aid local health program development, and it has provided tuition subsidies to support staff training. The Department of Health convened an On-site Wastewater Advisory Committee in 2000 to help identify needed changes in the state on-site program, and a rule redevelopment process was initiated in early 2002. Changes to the Administrative Code planned for the 2003-2005 biennium will facilitate the use of new product innovations and strengthen oversight of on-site system operation.

## **How the On-site Sewage Systems Program actions address work plan issues and priorities**

Each of the issues addressed by the work plan is rooted in the human activities associated with development of the Puget Sound region's natural resources. Proposed on-site sewage system actions will protect human health while improving water quality and habitat. An integrated effort by state and local agency staff is needed to improve the operation of on-site sewage systems through education, risk-

focused assessment and regulatory activities, and financial assistance to homeowners. The actions will address other work plan issues by reducing contributions to stormwater runoff, protecting habitat, and improving water quality in shellfish growing areas by focusing on the most sensitive areas and by better treating and dissipating wastewater. In addition, the actions will provide monitoring data to measure equipment and program effectiveness and will support the education and involvement of homeowners in system maintenance.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

### How work plan actions support a larger effort

Regulatory responsibility for on-site sewage systems is shared by state and local agencies. The Department of Health is responsible for developing a minimum statewide regulation (Chapter 246-272 WAC) covering systems up to 3,500 gallons per day capacity and for supporting local enforcement efforts. The departments of Health and Ecology share regulation of the design, construction, and operation of larger on-site sewage systems. Ecology regulates septage management. The Department of Licensing presently licenses professionals who design and inspect on-site sewage systems.

Local health jurisdictions carry out day-to-day program functions that make on-site sewage systems useful as community infrastructure. Local programs include education and development of public support, regulatory enforcement, and technical guidance for on-sites professionals. The Department of Health funding under this work plan supports technical assistance and coordination at the local level. In the private sector, the Washington On-site Sewage Association provides training for private and public professional practitioners and works to enhance the quality of private sector services.

The Washington Sea Grant Program and Washington State University Cooperative Extension provide on-sites education and technical support to local communities with funding allocated under the Education and Public Involvement program in this

work plan. Puget Sound Action Team support staff provides a regional perspective to on-sites issues while engaging in activities that bring stakeholder interests together to find innovative solutions to on-sites issues. At the local level, outreach activities provide technical assistance and education. The new Shellfish/On-sites grant program, administered by the Action Team staff, will enhance the management capacity of local health agencies by providing a funding source for repair of malfunctioning on-site sewage systems.

### Next steps beyond this biennium

A key next step in the *Puget Sound Water Quality Management Plan* that has not been achieved and was not proposed due to budget constraints or competing priorities is a review and evaluation of the effectiveness of local on-site sewage programs by the Department of Health.

### 2003-2005 Budget Request for State Actions

Total Proposed Funding	\$1,284,270
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**OS-0**      **Activities Reflecting On-Site Sewage System Program Goals and Objectives**

**PUGET SOUND ACTION TEAM**

Provide outreach and develop formal agreements with local health jurisdictions to guide funding for on-site sewage system repairs funded through the Oyster Reserve Lands law [E2SHB1658 (2001)].	Formal agreements with at least eight local health jurisdictions by June 2005. Repairs completed to at least 20 malfunctioning sewage systems by June 2005.	PSAT-04	120
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**OS-1**      **On-Site Regulations and Programs**

**DEPARTMENT OF HEALTH**

Assist local health jurisdictions to implement new on-site sewage system rules and integrate new requirements into local codes.	Development of orientation and training sessions about new on-site sewage system rules and the presentation of these to local health personnel within six months of State Board of Health adoption of new & revised rules. Review of proposed local jurisdiction rules for consistency with new state on-site sewage system rules within 90 days of receiving a complete review submittal.	DOH-04	121
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Complete the rule development process leading to adoption of new & revised rules by the Washington State Board of Health for on-site sewage systems under 3,500 GPD.	Draft rules via a stakeholder group and public process, and presentation of these to the State Board of Health (SBOH) for consideration and possible adoption by September 2004. Effective date for new on-site sewage system rules no less than 30 days following SBOH adoption.	DOH-04	122
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**OS-2**      **Local On-Site Sewage Operation, Maintenance, Inspection and Education Programs**

**PUGET SOUND ACTION TEAM**

Develop a risk-based on-site sewage model program and advocate its implementation by local governments as a part of their response to revisions to Chapter 246-272 WAC. Support the adoption of a model program by at least one local health jurisdiction by June 2005.	Distribution of a model program document by October 2004.	PSAT-04	123
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**UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM**

Provide technical assistance, education and information to local decision-makers, health districts, community residents and industry members about maintaining and monitoring on-site sewage systems to prevent pollution from the release of nutrients and pathogens.	Proper maintenance and monitoring of on-site sewage systems to prevent failures. Installation and signage of two demonstration on-site sewage system landscapes. Eight workshops addressing on-site sewage operation, maintenance and monitoring. Development of two new brochures to augment the workshops. Sponsoring a septic system landscaping contest.	UW-01	124
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>WASHINGTON STATE UNIVERSITY, COOPERATIVE EXTENSION</b>			
Provide technical assistance, education and information to local decision-makers, health districts, community residents and industry members about maintaining and monitoring on-site sewage systems to prevent pollution from nutrients and pathogens.	Workshops for the general public on a regular basis in priority areas. Technical assistance provided as requested.	WSU-01	125
<b><u>OS-4      Large On-Site Sewage Systems and Septage</u></b>			
<b>DEPARTMENT OF HEALTH</b>			
Initiate the rule development process leading to the adoption of new & revised on-site sewage system rules for systems over 3,500 GPD (Large On-Site Sewage Systems -- LOSS) by the Washington State Board of Health (SBOH).	Draft rules via a stakeholder group and public process, and presentation of these to the SBOH for consideration and possible adoption by June 2005. Effective date of new large on-site sewage system rules no less than 30 days following SBOH adoption.	DOH-04	126
Continue to review and oversee the planning, design, construction, and operation of Large On-Site Sewage Systems (LOSS).	Review of engineering reports and proposals for large on-site sewage systems within 90 days of receiving a complete application. Initial field evaluations and final inspections to assure compliance with standards and approved designs within 30 days of request for service.	DOH-04	127
<b>PUGET SOUND ACTION TEAM</b>			
Participate in the rule re-development process for large on-site sewage systems and in efforts to strengthen management of septage.	Stakeholder consultation and recommendations for changes that reflect provisions of the Puget Sound Water Quality Management Plan.	PSAT-04	128
<b><u>OS-5      Alternative and Experimental On-Site Sewage Systems</u></b>			
<b>DEPARTMENT OF HEALTH</b>			
Provide technical assistance (TA) to citizens and professionals regarding on-site sewage systems. Continue working with the Technical Review Committee to develop and update TA documents addressing performance, application, design, and operation & maintenance of the wide variety of on-site sewage systems.	Review of existing TA documents within 12 months of SBOH adoption of new & revised on-site sewage system rules, with update as needed for consistency with new on-site sewage system rules. Development and implementation of a database for tracking and targeting staff-provided technical assistance by June 2004.	DOH-04	129
<b>UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM</b>			
Provide technical assistance, education, and information to local decision-makers and communities about alternative, decentralized sewer systems.	Alternative and decentralized sewer system information to assist communities make appropriate decisions about replacing failing individual on-site systems. Support and assistance for specific projects addressing the impacts of failing on-sites.	UW-01	130

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**OS-6**      **Measuring Program Effectiveness**

**PUGET SOUND ACTION TEAM**

Define environmental and programmatic measures, apply them to assess the progress of local programs in eliminating on-site sewage system impacts on regional water quality, and develop a plan to address unresolved problems.	A regional assessment report by January 2005. A plan detailing regional and jurisdiction-specific needs and strategies by June 2005.	PSAT-04	131
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LOCAL GOVERNMENT ACTIONS	Action ID
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## ***SOUNDWIDE***

### **OS-2      Local On-Site Sewage Operation, Maintenance, Inspection and Education Programs**

#### **THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:**

<p>Local governments:</p> <ul style="list-style-type: none"> <li>* Revise local on-site sewage regulations to achieve consistency with changes to Chapter 246-272 WAC.</li> <li>* Adopt a risk-based plan for management of all on-site sewage systems using areas of special concern as one risk element. A risk-based management plan covers all elements of the program, including program administration, coordination with other agencies and utilities, as well as on-site system siting, design, construction oversight, and operation and maintenance functions. The program considers a range of parameters that define the risk of use of on-site systems within geographic areas as well as on individual sites. Categories of parameters that should be considered include proximity to sensitive land uses (e.g. water supply sources, shellfish growing areas), design and equipment limitations, and natural constraints such as soil permeability.</li> <li>* Continue to develop operation and maintenance oversight functions.</li> <li>* Provide adequate on-site sewage program funding.</li> </ul>	135
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# LOCAL WATERSHED ACTION

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## ***Puget Sound Water Quality Management Plan Goal***

- All watersheds within the Puget Sound basin counties shall implement local watershed plans that result in reduction and prevention of nonpoint pollution to Puget Sound.

## **Strategies for achieving the goal**

- Provide technical and financial assistance and incentives for local communities and governments both to support development of new watershed plans and to support the implementation of completed watershed plans.

## **Current status of the program**

Local watershed plans provide a comprehensive framework for managing the impacts of human activities on the Puget Sound environment. During the 1990s, the watershed planning process defined under the *Puget Sound Water Quality Management Plan* and a supporting state regulation (Chapter 400-12 WAC) built a foundation of local watershed groups that produced more than 40 watershed plans to prevent nonpoint pollution. In 1998 the Watershed Planning Act and the Salmon Recovery Act were enacted by the legislature to support planning by larger-scale Water Resource Inventory Areas (WRIAs).

In Puget Sound, 15 of 19 WRIAs are involved in planning at the local level using state funding administered by the Department of Ecology under the Watershed Planning Act. Of those 15, at least 12 are committed to addressing optional components of water quality, instream flows, or habitat in addition to the required water quantity. Watershed planning under Chapter 400-12 WAC is underway in some areas. In other areas, watershed-planning processes are using local resources. Salmon recovery processes in some WRIAs are integrated with watershed planning, and in others coordinate with separate watershed planning processes. What is common to all of these processes is that they bring together state, local, tribal, and federal agencies to assist citizens, business interests, environmental groups, water purveyors, forestry and development interests, farmers and other interests to develop solutions to local watershed problems, and to make those decisions at the local level.

Approximately 10 Puget Sound WRIA plans are scheduled for completion during the 2003-2005 biennium. The state, under the lead of the Department of Ecology, has initiated a Watershed Plan Implementation Committee with representatives from watershed planning groups to propose solutions for a long-term, stable foundation for watershed plan implementation.

Several processes may converge in watershed plans. Water Cleanup plans (also called Total Maximum Daily Loads, or TMDLs) are either underway or planned for a number of water bodies listed by Ecology as impaired under the Clean Water Act. Marine Resources Committees in the seven counties of the Northwest Straits Initiative are addressing nearshore and marine concerns. Protection measures in watershed plans should be consistent with local growth management updates. The integration of watershed plans into a regional salmon recovery plan through the Puget Sound Salmon Forum is an opportunity to bring these processes together where they are separate in order to build regional coordination for protection and restoration of watershed ecosystems.

Programs in the *Puget Sound Water Quality Management Plan*, including the comprehensive stormwater management program, the on-site sewage system program, the shellfish protection program, and the marine and freshwater habitat program, should be incorporated into local watershed plans. The challenge for the 2003-2005 biennium will be to develop a framework to implement local watershed plans in coordination with salmon recovery plans, local land use plans, and Water Cleanup plans for impaired water bodies. In addition, as plans are implemented, monitoring and adaptive management programs must be developed and initiated. Watershed planning is the centerpiece of the state strategy for resource management and salmon recovery, and local plans should integrate actions from this work plan as appropriate.

## **How the watershed planning actions address work plan issues and priorities**

Watershed plans should incorporate the comprehensive stormwater management program in order to address local problems related to water quality, habitat, flooding, wetlands, groundwater recharge, instream flows, and development impacts.

Watershed plans can support habitat, water quality and water quantity aspects of recovery for species at risk, prevent sediment contamination, and contribute to the protection and restoration of marine and freshwater habitat. Incorporating land use and regulatory recommendations to promote on-site sewage system management and shellfish protection is necessary to maintain the health of watersheds and nearshore marine waters.

Public education and involvement is a necessary component of planning processes for watershed councils and planning groups so that plans will have local support for implementation. Puget Sound Ambient Monitoring Program results help in evaluating the effectiveness of watershed plans and contribute data needed for adaptive management by local decision-makers. In addition, they assist in recognizing and responding to regional needs that require state or federal technical assistance and coordination.

### **How work plan actions support a larger effort**

A number of local, state, federal and tribal government agencies as well as local water purveyors, business interests, farmers, citizens and others are devoting significant time and resources to watershed planning. Local, tribal, federal, state, and in some cases private funds support data gathering, analysis, and management, habitat restoration projects, public education, and other activities.

Work plan funds tracked under the Agricultural Practices program in this work plan support the participation of conservation districts and the Department of Agriculture in watershed planning. Conservation districts in Puget Sound are involved in activities that include water quality monitoring, salmon restoration, watershed planning, farm planning and technical assistance, data management, stormwater management, and public education. The participation of the Department of Agriculture is important to addressing the needs of local farmers and representing the interests of agriculture.

The Department of Ecology reports in this work plan on funds used to support watershed planning under the Watershed Planning Act. Ecology is the lead agency for watershed planning in coordinating financial, technical, and monitoring assistance to local planning efforts. By supporting watershed planning functions and filling gaps in coordination,

funds dedicated to the protection of Puget Sound contribute to more effective use of other resources being applied to watershed planning and implementation.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

### **Next steps beyond this biennium**

The 1998 Watershed Planning Act (Chapter 90.82 RCW) establishing the WRIA planning process includes water quality and habitat planning as optional elements only. As a result, not all WRIA planning groups have chosen to include recommendations to protect water quality and habitat. The variety of watershed planning processes underway includes the Ecology-funded WRIA plans, Chapter 400-12 WAC nonpoint plans, Water Cleanup Plans under the Clean Water Act, and salmon recovery plans being developed through the Puget Sound Shared Strategy. Funding and technical assistance are needed to fill gaps, align recommendations, and where possible integrate the different types of watershed plans so that local actions to implement the plans are consistent and coordinated. *Puget Sound Water Quality Management Plan* recommendations for local stormwater, shellfish, on-site sewage systems, and habitat programs should be incorporated into planning processes where appropriate.

### **2003-2005 Budget Request for State Actions**

Ecology reports on funds used for watershed planning that are not a proviso under the work plan.



STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>WP-6      Technical Assistance for Watershed Plans</u></b>			
<b>CONSERVATION COMMISSION</b>			
Provide watershed assistance to local/regional watershed groups, seeking additional funding to leverage existing funds, and collecting and sharing water quality monitoring data.	Participation in meetings, grant applications, local government assessments, and water quality monitoring Geographic Information System layers and data systems.	CC-01	140
<b>DEPARTMENT OF ECOLOGY</b>			
Assist local governments and local planning units in assessing the status of their watersheds and in developing and implementing watershed plans.	Specific technical assistance in conducting watershed assessments and provision of related information about watersheds. Completion of approximately 10 watershed plans in Puget Sound. Adoption of rules and ordinances to implement actions and recommendations identified in watershed plans. Completion and implementation of the Phase 4 Watershed Plan Implementation Committee recommendations on funding the implementation of 2514 watershed plans.	DOE-03	141
<b>PUGET SOUND ACTION TEAM</b>			
Provide technical assistance to local watershed planning groups to promote consistency of watershed plans with the recommendations of the Puget Sound Water Quality Management Plan.	Technical assistance to watershed groups in 15 Puget Sound Water Resource Inventory Areas through resource materials, website resources, presentations, and meetings with local groups.	PSAT-03	142

LOCAL GOVERNMENT ACTIONS	Action ID
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## ***SOUNDWIDE***

### **WP-0      Activities Reflecting Local Watershed Planning Program Goals and Objectives**

#### **THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:**

<p>Local governments participate in watershed planning in cooperation with citizens, farmers, environmental organizations, businesses and industries, water districts, tribes, and state and federal agencies and other interested groups. Watershed plans should include elements of the Puget Sound Water Quality Management Plan including:</p> <ul style="list-style-type: none"> <li>* Comprehensive stormwater program to address water quality, habitat, flooding, aquifer recharge, and instream flows.</li> <li>* Protection of water quality draining to shellfish growing areas.</li> <li>* On-site sewage system operations and maintenance programs.</li> <li>* Habitat protection, including nearshore habitat.</li> <li>* Environmental education and public involvement programs.</li> </ul> <p>Watershed plans should also include:</p> <ul style="list-style-type: none"> <li>* Recommendations for local land use measures to protect water quality and biological resources.</li> <li>* Actions that contribute to the development of a salmon recovery plans through the Shared Strategy and Puget Sound Salmon Forum, and actions consistent with water cleanup plans (Total Maximum Daily Loads) for compliance with the Endangered Species Act and the Clean Water Act.</li> <li>* Recommendations for implementation, monitoring, and adaptive management.</li> </ul>	145
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# AGRICULTURAL PRACTICES

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## ***Puget Sound Water Quality Management Plan Goal***

- To reduce and ultimately eliminate harm from pollution stemming from agricultural practices on both commercial and noncommercial farms, including animal waste pathogens, pesticides, sediments and nutrients.

## **Strategies for achieving the goal**

- Implement comprehensive programs through state and local agencies involving education, financial and technical assistance, and, as necessary, regulation and enforcement, to effectively implement farm management practices and measures.

## **Current status of the program**

The fertile soils of the Puget Sound basin are used for a wide range of commercial and noncommercial farming. Agriculture is an important part of the basin's economy and culture. However, agriculture can also be a cause of nonpoint source pollution. Animal wastes, pesticides, sediments and nutrients resulting from poor agricultural practices can threaten water quality.

The state has approached controlling pollution from agricultural sources separately for dairy and non-dairy farms. The non-dairy approach has been largely voluntary, emphasizing education about best management practices. Local conservation districts assist farmers in developing farm plans, and the state has supported local efforts with education programs, as well as financial and technical assistance and, where necessary, regulation and enforcement.

For dairy farms, the state has developed a regulatory approach. The Dairy Nutrient Management Act of 1998 created a new program within the Department of Ecology for managing dairy wastes. The program uses a process of registration, inspection and technical assistance to control wastes from commercial dairies. All dairy farms are required to develop approved dairy nutrient management plans that may include riparian setbacks.

Since the listing of certain species of salmon, steelhead and bull trout as threatened under the federal Endangered Species Act, new considerations have been applied to agricultural practices. Each farmer needs to be assured that they will not be

challenged and found liable for "taking" of the listed species or for the destruction of its habitat. To develop a set of standards for agricultural best management practices acceptable to the National Marine Fisheries and U.S. Fish and Wildlife services, a cooperative effort referred to as the Agriculture, Fish and Water process has been underway.

State and federal agencies and the state's major agricultural commodity groups have been meeting and negotiating the size of riparian buffers and issues such as whether all farms should complete farm plans. The Natural Resources Conservation Service is close to developing a modified technical manual for use in northwest Washington counties (Island, King, Skagit, Snohomish and Whatcom). This new manual will specify riparian buffers and other best management practices approved by the federal agencies. The revised manual, scheduled for completion in the fall of 2002, will be presented to the National Marine Fisheries and U.S. Fish and Wildlife services. Once the new manual is approved by the services, it will offer some assurance to agricultural producers that they are complying with the Endangered Species and Clean Water acts provided they follow the prescriptions in the manual.

A challenge to implementing farm plans once they are developed has been the lack of grants available for this purpose. Addressing funding in the 2003-2005 biennium is important to continued progress in reducing nonpoint pollution from agricultural sources.

## **How the Agricultural Practices actions address work plan issues and priorities**

State agencies have proposed actions in this work plan to protect water quality from agricultural practices. The main emphasis is on successfully developing and implementing farm plans that will protect surface and groundwater from agricultural contamination and protect fish species that have been listed under the Endangered Species Act.

An action has been included recommending that local governments assist conservation districts in developing stable funding support for their activities. Some counties use stormwater utility fees for conservation district support, while others have approved conservation district special assessment programs. Generating local funds will assist districts

to implement farm plans and protect fish habitat and water quality.

All of these actions will assist in addressing important work plan issues and priorities, such as shellfish protection, habitat protection and public education.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

### **How work plan actions support a larger effort**

Funding designated for work plan implementation for the departments of Agriculture and Ecology and the Conservation Commission support the actions of this program. Puget Sound conservation districts assist landowners and farmers in developing and implementing best management practices to protect water quality and habitat. Work plan funds support Agriculture activities for pesticide education and enforcement as well as participation in watershed planning.

However, the state agency effort in the Puget Sound basin is larger than the actions listed in this work plan. Washington State University Cooperative Extension conducts many technical workshops on agricultural best management practices, the Department of Agriculture conducts multilingual trainings on pesticide use and the Department of Ecology coordinates compliance efforts with conservation districts to respond to water quality complaints on agricultural lands.

Local governments provide funding for some conservation district efforts, and the federal Natural Resources Conservation Service provides education, technical assistance, and funding support. These actions clearly benefit Puget Sound, but are not carried out with funds dedicated to Puget Sound programs.

### **Next steps beyond this biennium**

The management plan calls on state agencies to provide funding to implement best management practices contained in farm plans. Ecology is evaluating policies for distributing water quality

grants to determine whether or not Centennial Clean Water funds should be available as grants for this purpose. Loans under the State Revolving Fund are currently available, but modifying the criteria to allow grant funding to be used for this purpose provides farmers with more incentive to implement best management practices to protect water quality and habitat.

### **2003-2005 Budget Request for State Actions**

Proposed Enhancement	\$150,000
Total Proposed Funding	\$1,558,500

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**AG-0**      **Activities Reflecting Agricultural Practices Program Goals and Objectives**

**DEPARTMENT OF ECOLOGY**

The Department of Ecology will continue to participate as a member(s) of: the State Conservation Commission and the Technical Advisory Committee to the Washington State Natural Resources Conservation Service; the Agriculture, Fish and Water discussions with the aim of developing both agreements and tools to implement agriculture programs to protect fish and water quality; and the oversight committee for Comprehensive Irrigation District Management Plans (CIDMPs).	Agreement on and adoption of revised Natural Resources Conservation Service Field Office Technical Guide practices for the Conservation Reserve Enhancement Program and northwest Washington state. Completion of one Comprehensive Irrigation District Management Plan (CIDMP) in the Dungeness Basin (Washington Department of Agriculture is lead). Technical assistance, education and other support to conservation districts and farm operators on water quality problems and best management practices. Participation on the oversight committee for CIDMPs, as well as technical committees associated with CIDMP pilot projects. Development of agreements and tools to implement agriculture programs to protect fish and water quality.	DOE-04	150
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Reduce pollution from dairy operations in the Puget Sound basin and statewide by implementing the 1998 Dairy Nutrient Management Act. Continue to perform routine and follow-up inspections to identify potential sources of pollution from dairy cattle. Coordinate with local Conservation Districts and Natural Resources Conservation Services staff to encourage the implementation of best management practices. Provide water quality technical assistance and, where needed, issue wastewater discharge permits and take appropriate enforcement actions. Continue to register dairy farms and maintain a database with information on dairy farms including Dairy Nutrient Management Plan (DNMP) certification, inspections and compliance.	Continued development and adoption of updated water quality standards addressing bacteria criteria for fresh and marine waters by 2004. Reductions or elimination of pollution from dairies to improve water quality in Puget Sound and adjacent waters. Reductions of at least 10 percent for the Fishtrap/Bertrand basin of the Nooksack and the Quilceda/Allen basin. Certified DNMPs for a minimum of 50percent of dairies in the Puget Sound basin by 2004.	DOE-04	151
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**DEPARTMENT OF AGRICULTURE**

Provide technical assistance to local governments and the public on the proper use and disposal of pesticides. Take enforcement actions as required. Dispose of unusable agricultural pesticides through a separately funded disposal program. Assist local governments in implementation of Water Resource Inventory Area activities.	Investigation, reporting and enforcement actions, as necessary, for all referred complaints about possible pesticide misuse. Funding is anticipated to enhance investigative activity by 20 cases annually. Technical assistance provided by on-site visits, educational material and public presentations. A minimum of 60 annual Technical Assistance personal contacts and presentations. Participation in a minimum of 25 WRIA meetings to represent agricultural interests and provide information on agency regulations.	WSDA-01	152
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>AG-1</u></b> <b><u>Local Conservation Programs</u></b>			
<b>CONSERVATION COMMISSION</b>			
Develop and implement conservation plans for land owners/operators to improve water quality in the Puget Sound area.	Plans developed and implemented.	CC-01	153
<b>WASHINGTON STATE UNIVERSITY, COOPERATIVE EXTENSION</b>			
Implement cooperative programs and provide technical assistance for commercial and noncommercial farmers in controlling and preventing the release of excessive nutrients and pathogens.	Training and technical assistance on an ongoing basis as needs are identified.	WSU-01	154
<b><u>AG-2</u></b> <b><u>Animal Waste Management</u></b>			
<b>WASHINGTON STATE UNIVERSITY, COOPERATIVE EXTENSION</b>			
Work cooperatively with relevant agencies and organizations and provide commercial and noncommercial farmers with assistance on the proper management of wastes from farm animals.	Trainings and technical assistance on an ongoing basis as needs are identified. Animal waste management will also be incorporated into 4-H youth training programs.	WSU-01	155
<b><u>AG-3</u></b> <b><u>Cost-Sharing Programs</u></b>			
<b>CONSERVATION COMMISSION</b>			
Assist individuals and commercial or noncommercial ventures on private lands to implement best management practices (BMPs). Design and/or construct engineered BMPs for Puget Sound area land owners/operators for water quality protection. (Budget enhancement requested.)	BMPs implemented, including those requiring professional engineering design.	CC-01	156

LOCAL GOVERNMENT ACTIONS	Action ID
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***SOUNDWIDE***

**AG-0      Activities Reflecting Program Agricultural Practices Goals and Objectives**

**THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:**

Local governments collaborate with local conservation districts to develop and implement stable and predictable funding programs for the districts' efforts to protect water quality. These options might include dedicated stormwater utility fees, county general funds, or a special assessment to fund the activities of conservation districts.	159
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# MARINAS AND RECREATIONAL BOATING

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## ***Puget Sound Water Quality Management Plan Goal***

- To reduce and ultimately eliminate harm from wastes generated by recreational boating activities.

## **Strategies for achieving the goal**

- Coordinate implementation of the program by state agencies and local governments.
- Simultaneously address the needs for waste disposal facilities and processes, education for appropriate constituencies, financial and technical assistance, and regulation and enforcement of boating-related activities that affect water quality.
- Evaluate changes in both behavior and water quality that result from the above strategies, and evaluate the need for more extreme protective measures (no-discharge and no-anchorage areas).

## **Current status of the program**

Recreational boating is a popular pastime in Puget Sound. Puget Sounders own more than 165,000 powerboats, 21,500 sailboats, 45,000 canoes and kayaks, and numerous sailboards, inflatable boats and other personal watercraft. Public and private marinas provide moorage for thousands of boats.

Marinas and the operation, maintenance and cleaning of boats can be significant sources of pollutants in water and sediments, as well as in animal and plant tissues. Toxic pollutants enter marina waters through discharges from boats or other sources, spills or stormwater runoff. Untreated sewage from boats is one of several nonpoint sources of pathogens that pose a threat to human health. These pathogens may reside in the water column, in sediments and in the tissues of shellfish. In some areas of Puget Sound, water quality and marine life may be degraded by the discharge of sewage from recreational boats, and may be a problem in smaller bays with poor water circulation near shellfish beds, swimming areas and marinas. Boat operations, including anchoring, can destroy habitat, resuspend bottom sediments and increase turbidity, thereby affecting the photosynthetic activity of algae and estuarine vegetation.

The State Parks and Recreation Commission currently provides grants for sewage disposal

pumpouts and other waste-disposal facilities at marinas and other facilities. Between 1994-2000, 58 new pumpout stations were installed in Puget Sound under the Clean Vessel Act Pumpout Grants Program, and 18 more were under contract to be installed. The Commission also provides education and training on boat waste issues, including brochures and pumpout training days. Much of this activity is enhanced through partnerships with trade associations and environmental groups.

Agencies, ports and marinas, trade associations, environmental groups and others participate in the annual National Boating Campaign, a national effort to promote clean boating practices. The Interagency Committee for Outdoor Recreation provides grants to improve boater access. The Washington Sea Grant Program and the Puget Soundkeeper Alliance have provided boater education materials and training. The Marina/Boater Task Force and Boater Advisory Committee now only meet on an as-needed basis with efforts focused on implementing current strategies.

## **How the Marinas and Recreational Boating actions address work plan issues and priorities**

The Marinas and Recreational Boating Program addresses several other issues identified in this work plan, including sediment contamination, species at risk, alteration of marine and freshwater habitat, and threats to shellfish harvesting areas.

Toxic contaminants, which contribute to the contamination of the Sound's sediments, are found in boat paints and stains, motor oil and gas, cleaning solvents, and other boating supplies. Boater education and provision of disposal facilities are two key approaches to ensure that toxic materials do not end up in Puget Sound. Good boating practices also help prevent toxic contaminants from causing threats to species at risk, such as salmon and groundfish.

Because of their location on shorelines, marinas can significantly alter marine habitat. Construction practices can damage or destroy seagrasses and benthic communities when piers are installed. Dredging activities and boat anchors also damage benthic flora and fauna. Care must be taken in the siting of marinas, and, once sited, in the construction and operation of marina facilities.

Bacteria in boater sewage, if discharged into the Sound, can pollute the Sound and contribute to the closure of productive shellfish beds. Additional pumpouts throughout the Sound and boater education should help reduce discharge of boat sewage. Boater education can also reduce boat litter which can damage aquatic life, beaches and waters, and at times be a safety concern for others enjoying Puget Sound.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

### **How work plan actions support a larger effort**

The Department of Ecology administers the National Pollutant Discharge Elimination System permit program for boatyards. Many of the boatyards covered by the permit perform much of their work on recreational boats. The permit covers all work performed at the boatyard, including bottom painting. Permittees must either treat all wastewater before discharging it to Puget Sound, or discharge it to a municipal treatment plant. Work plan funding to the State Parks and Recreation Commission supports a boater sewage pumpout program and enables the department to coordinate with state, federal, and local agencies as well as citizen groups to provide educational programs to improve public awareness of and commitment to protecting water quality and habitat.

### **Next steps beyond this biennium**

The key next step called for in the management plan that has not been proposed by agencies due to budget constraints or competing priorities is evaluating the need for no-discharge areas in Puget Sound by the departments of Ecology and Health in consultation with State Parks.

### **2003-2005 Budget Request for State Actions**

Total Proposed Funding	\$191,000
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**MB-0**      **Activities Reflecting Marinas and Boaters Program Goals and Objectives**

**DEPARTMENT OF ECOLOGY**

Administer and re-issue the general Boatyard National Pollution Discharge Elimination System (NPDES) Permit. Provide general information related to the permit, conduct periodic inspections and issue enforcement actions when appropriate.	Re-issued general boatyard permit in 2003 and a reduction of water quality degradation due to boatyard activities, such as bottom scraping, pressure hosing and painting.	DOE-02	160
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**MB-1**      **Coordination and Public Involvement**

**PUGET SOUND ACTION TEAM**

Convene the Marina/Boater Task Force to assess current pollution prevention efforts (including public education, financial assistance and regulations) and discuss the need for designation of no-discharge zones, additional education or outreach, or other measures.	At least one meeting of the Marina/Boater Task Force. Assessment of current pollution prevention efforts, and recommendations to the Puget Sound Council and Action Team.	PSAT-04	161
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**MB-4**      **Marina and Boater Education Program**

**STATE PARKS & RECREATION COMMISSION**

Continue with cooperative efforts with the Action Team staff, Department of Fish and Wildlife, Washington Sea Grant and other interested groups to develop and produce information for recreational boaters that describes existing and potential aquatic nuisance species and how boaters can provide an effective means of reducing the spread of such species.	Signs at marinas and launch ramps throughout the Puget Sound identifying aquatic nuisance species and what boaters must do to prevent the spread of these species. Increased awareness of these problem species and involvement of recreational boaters in preventive actions.	PRC-02	162
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In cooperation with the U.S., Fish and Wildlife Service, Washington Departments of Health, Ecology, Natural Resources, Fish and Wildlife, the Interagency Committee for Outdoor Recreation, the Puget Soundkeeper Alliance, county and city natural resource and health agencies, Washington Sea Grant, Action Team staff and any other interested boaters organizations, continue to provide educational materials to assist recreational boaters with understanding water quality issues, pollution prevention and ways that they can help improve water quality in Washington.	Guidebooks, brochures, radio spots, posters, internet information and other materials that will keep boaters advised of environmental issues and offer solutions to improve water quality. A survey done every other biennium will show that more boaters are aware of environmental issues surrounding their boating enjoyment and are increasing use of clean boating practices.	PRC-02	163
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STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**MB-5**      **Construction of Sewage Waste Disposal Facilities**

**STATE PARKS & RECREATION COMMISSION**

Promote, coordinate and administer the Federal Clean Vessel Act Boater Sewage Facility funding program which places boater sewage disposal equipment at public and private marinas, launch ramps and other boater destination or moorage locations.	Facilities for the removal of boater sewage from the waterways used by recreational boaters. The amount of sewage collected will increase as existing facilities are improved and new facilities are added to a state wide network.	PRC-01	164
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# EDUCATION AND PUBLIC INVOLVEMENT

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## ***Puget Sound Water Quality Management Plan Goal***

To support, improve and sustain regional education and public involvement programs that:

- Inform, educate and involve individuals, groups, businesses, industry and government in the clean up and protection of Puget Sound.
- Increase understanding of the Sound's ecosystem.
- Create the commitment necessary to sustain efforts to improve and protect water quality and habitat over the long term.

## **Strategies for achieving goals**

- Create a public involvement policy for agencies and local governments.
- Help state agencies and tribal governments coordinate education programs on marine and freshwater habitats, water quality policy issues and volunteer action.
- Hire field agents to coordinate among local and regional education and public involvement programs.
- Administer a Public Involvement and Education Fund (PIE Fund) to support short-term public involvement and education efforts in both the private and public sectors.

## **Current status of the program**

Involving and educating the public in environmental protection is a key strategy in the management of Puget Sound. Currently, dozens of education and stewardship programs are operating in the Puget Sound basin. Government agencies at the federal, state, local and tribal levels have allocated resources towards education as a cost-effective means of attaining resource management goals. A variety of interest groups offer education and stewardship opportunities for citizens and students. The Puget Sound Water Team recognizes the value of this work for protection of the Sound and has developed a network of working partnerships within local communities by means of local liaisons, field agents and the Public Involvement and Education (PIE) Program.

A comprehensive environmental education program for Puget Sound must include schools. Schools offer an opportunity and a challenge for building an informed citizenry. Since school reform, schools have been required to focus on academic achievement in basic subject areas. To be accepted by the schools, education about Puget Sound must conform to the state educational standards. Fortunately, studies show that a quality environmental curriculum designed to meet the standards improves student learning more than does a traditional curriculum. Environmental educators are developing resources and curricula that enable students to participate in environmental activities that fulfill academic requirements. However, funding for environmental education in schools is limited and there is a need for local examples of schools that integrate environmental education into post-reform Washington State teaching methods, standards, and assessments.

People learn to value the environment when they have opportunities to experience and enjoy it. State and local agencies manage public lands that offer a wealth of outdoor learning, environmental education, and recreation experiences. Interpretive and education programs in parks and other public lands are needed to tap this potential.

## **How the Education and Public Involvement actions address work plan issues and priorities**

Most priorities in the work plan share two common elements: they describe the kinds of individual behavior or policy changes that are needed to protect Puget Sound, and they acknowledge that the primary means of achieving those changes is through education. The choices individuals make in their lives on a daily basis, and on a larger scale, the land use decisions communities make have a major influence on the habitat and hydrology of the Puget Sound basin and the plants, animals and people who rely on a healthy ecosystem.

Since every person and institution in the Puget Sound basin has an influence on the health of the Sound, the Action Team staff coordinates educational efforts at several levels. Local liaisons form the outreach and technical assistance arm of the Action Team and work to encourage coordination of local efforts to protect water quality and biological resources. They work with local governments to encourage them to

include policies and actions called for in the *Puget Sound Water Quality Management Plan* in local comprehensive plans, shoreline master programs, development regulations, and critical areas ordinances. These policies and actions address work plan priorities such as preservation of marine and freshwater habitat, protection measures for species at risk, and stormwater management. Field Agents from the Washington State University Cooperative Extension and the Washington Sea Grant programs combine their technical expertise and the resources of both universities to address work plan issues such as on-site sewage systems, shellfish, habitat, and innovative watershed and land use planning programs.

The Public Involvement and Education (PIE) program provides support for community-based education. During the 2003-2005 biennium, the PIE program will support issues and ongoing priorities identified in the work plan, and will invite citizens, local and tribal governments, schools, and businesses to propose education projects that help to fulfill biennial and long-term objectives.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

## How work plan actions support a larger effort

Education to encourage protection and restoration of Puget Sound is an ongoing effort that involves state and federal agencies, tribes, local governments, businesses, media, schools, private foundations, trade associations, and thousands of citizen volunteers in every community. The actions funded under this work plan support Soundwide coordination, funding and technical support that leverage and strengthen those efforts. The PIE program provides model programs, funding, and a focus on priorities to build partnerships that often lead to ongoing programs to continue and expand work begun under PIE funding. In addition, many of the actions listed under other programs in this work plan provide funds for technical assistance and education. The work plan plays a significant role in supporting environmental education in collaboration with a larger community-

based network of institutions and citizens working to protect Puget Sound.

## Next steps beyond this biennium

The key next step called for in the *Puget Sound Water Quality Management Plan* that has not been achieved is for the University of Washington Sea Grant and Washington State University Cooperative Extension to establish water quality field agent positions for the several remaining counties (Clallam, King, Snohomish, Island, San Juan, Skagit, and Whatcom) and for the Puget Sound tribes. Funding for these positions has not been allocated due to budget constraints, competing priorities and other barriers.

## 2003-2005 Budget Request for State Actions

Proposed Enhancement	\$60,000
Total Proposed Funding	\$3,559,054

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>EPI-1</u>      <u>Education and Public Involvement Guidelines</u></b>			
<b>WASHINGTON STATE UNIVERSITY, COOPERATIVE EXTENSION</b>			
Provide technical assistance on public involvement for local government staff and elected officials. Technical assistance shall include developing materials, providing training and making recommendations. Training topics shall include consensus-building, conflict management and ways to use volunteers. Provide citizens with training in public involvement related to federal, state and local permit processes, and ways to organize and maintain effective volunteer groups. (Budget enhancement requested.)	Training and technical assistance for local government staff and elected officials upon request by water quality field agents. Incorporation of public involvement training into ongoing programs dealing with land and resource management.	WSU-01	170
<b><u>EPI-2</u>      <u>Coordination Mechanisms</u></b>			
<b>CONSERVATION COMMISSION</b>			
Promote water quality practices to the public through educational activities.	Newsletters and public workshops for citizens and students.	CC-01	171
<b>PUGET SOUND ACTION TEAM</b>			
Coordinate with state agencies to provide technical assistance and outreach to local governments and watershed and salmon recovery groups. Encourage coordination of local efforts with salmon recovery and growth management planning. Educate implementers about the Puget Sound Water Quality Management Plan and Work Plan. Provide guidance and resources to local citizen and volunteer groups for public education to promote stewardship models for habitat, stormwater management, shellfish protection, on-site sewage systems, and individual actions to protect water quality for residents, boaters, farmers, businesses, and other groups.	Technical assistance to all 12 Puget Sound counties and 70 percent of Puget Sound cities on growth management, salmon recovery, and watershed planning to implement the Puget Sound Water Quality Management Plan programs. Technical assistance to citizen groups in 12 counties. Updated Action Team website. Quarterly issues of Sound Waves newsletter.	PSAT-03	172
Instruct K-12 teachers on the use of the environment and how to access community resources to motivate student learning with hands-on, problem-solving curricula that fulfill state academic standards and prepares students for state assessments. Include water quality monitoring and service learning projects, including restoration. Expand school use of environmental learning centers around the Sound.	Enhanced access to community and outdoor environmental resources through the use of a variety of teacher workshops, curricula, sustainability training, water quality monitoring training, service learning projects, educational materials and equipment.	PSAT-05	173

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM</b>			
Provide regional water quality specialists offering information reflecting multi-disciplinary knowledge on issues important to local communities and the Puget Sound ecosystem. These specialists will help educate local government decision-makers, industries, schools, regional organizations and community groups about a variety of nonpoint source pollution and its consequences. Encourage individuals and groups to participate in programs and projects addressing Puget Sound water quality issues.	Educational workshops and displays in communities covering a range of nonpoint pollution issues such as household hazardous waste, on-site sewage systems, stormwater runoff, pollution from nutrients and pathogens, shellfish protection, salmon habitat, boat maintenance, dock care, and pet waste. Participation in community festivals and other events to present water quality issues. Coordination of watershed and habitat tours. Shoreline cleanup and restoration projects. Workshops and public participation in volunteer water quality monitoring. Teachers better prepared to integrate environmental and natural resource issues into their curriculum.	UW-01	174
Provide regional water quality specialists to coordinate local educational programs with regional, state and national efforts.	Greater impact for the educational programs of local communities, state agencies and community groups, organizations and interest groups using less resources through enhanced coordination and improved delivery. Participation in the American Fisheries Society Education and Water Quality section, National On-Site Wastewater Recycling Association, National Shellfisheries Association and National Marine Educators Association public education efforts.	UW-01	175
<b>WASHINGTON STATE UNIVERSITY, COOPERATIVE EXTENSION</b>			
Water quality field agents will coordinate and implement local and regional education and public involvement efforts to implement the management plan with an emphasis on working with local governments and communities, and preventing pollution caused by excessive nutrients and pathogens.	Assistance to local government staff, elected officials and communities developing, implementing and evaluating education and public involvement activities or programs that are related to Puget Sound water quality. Assistance to the Action Team staff outreach efforts and to local communities working on Puget Sound action campaigns. Facilitated citizen participation in local, state and national water quality issues. Assistance to local shellfish protection districts, clean water districts and watershed committees. Local programs coordinated with regional and state programs. The transfer of university-based research and other appropriate information and technology to local communities. Workshops and technical assistance to the general public provided on priority Puget Sound water quality and habitat issues such as onsite sewage system maintenance, habitat protection and stormwater runoff. Facilitated communication of community research needs to appropriate university programs. Regular meetings with the Action Team support staff to coordinate activities for implementing the management plan.	WSU-01	176



STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>EPI-4</u>      <u>Programs Tailored to Volunteer Audiences</u></b>			
<b>WASHINGTON STATE UNIVERSITY, COOPERATIVE EXTENSION</b>			
Develop and utilize the interest and expertise of volunteers who wish to protect or enhance Puget Sound water quality and habitats, and who wish to educate their communities on related issues.	Implementation of training programs for volunteer Watershed Stewards for Puget Sound watersheds. Availability of volunteers to provide technical assistance to government and non-profit sector programs.	WSU-01	177
<b><u>EPI-5</u>      <u>Programs Tailored to Business and Industry Audiences</u></b>			
<b>WASHINGTON STATE UNIVERSITY, COOPERATIVE EXTENSION</b>			
Provide training and coordination to priority audiences to prevent pollution and protect habitat. Utilize the educational resources of conservation districts, Agriculture, Ecology, Fish and Wildlife, and Health to provide agricultural audiences and pesticide applicators with a comprehensive message on the actions necessary to prevent their wastes from entering the water. Utilize the educational resources of conservation districts, Agriculture, Ecology, Fish and Wildlife, Natural Resources, Health, Sea Grant, and private consultants to provide land development-related audiences with a comprehensive message on how they can best preserve, protect and restore habitat.	Pesticide applicator's license training and re-certification programs provided for the Department of Agriculture incorporating specific best management practices on preventing contamination of water bodies. Educational programs, provided on a monthly basis, on habitat protection and enhancement to developers, realtors and contractors.	WSU-01	178
<b><u>EPI-6</u>      <u>Programs Tailored to Youth Audiences</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Instruct K-12 teachers on how to use the environment and access community resources to motivate student learning with hands-on, problem solving curricula that fulfills state academic standards and prepares students for state assessments. Include water quality monitoring and service learning projects, including restoration. Expand school use of environmental learning centers around the Sound.	Teacher workshops, curricula, sustainability training, water quality monitoring training, service learning projects (including restoration), educational materials and equipment, access to community and outdoor environmental resources.	DOE-11	179
<b>PUGET SOUND ACTION TEAM</b>			
Work with the Governor's Council on Environmental Education, Department of Ecology, and the Department of Fish and Wildlife to provide resources and guidance for K-12 schools and agency educators for environmental service learning projects.	Workshops, printed materials, and case studies that provide resources and guidance for environmental service learning projects.	PSAT-05	180

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**EPI-8**      **Public Involvement and Education Fund**

**PUGET SOUND ACTION TEAM**

The Public Involvement and Education (PIE) program will provide resources and support for community based education projects that include goals and objectives to help implement the 2003-2005 work plan.

Increased public awareness, creation of stewardship opportunities, and motivation of behavior changes to protect Puget Sound through quality education projects reaching a broad cross section of the Puget Sound public.

PSAT-05

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LOCAL GOVERNMENT ACTIONS	Action ID
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## ***SOUNDWIDE***

### **EPI-0      Activities Reflecting Education and Public Involvement Program Goals and Objectives**

#### **THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:**

Local governments and schools:

- \* Provide opportunities for students and citizens to learn about the relationship of Puget Sound to the larger ecosystem and its social, economic, and environmental value in their community; and
- \* Apply for funding from the Public Involvement and Education program or other public or private sources to help implement priorities from the Puget Sound Work Plan.

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# AQUATIC NUISANCE SPECIES

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## **Puget Sound Water Quality Management Plan Goal**

- Prevent the unauthorized or accidental introduction of non-native species to Puget Sound and control the spread of and eradicate aquatic and wetland nuisance species already introduced.

## **Strategies for achieving the goal**

- Adopt existing state and regional aquatic and wetland nuisance species management plans and programs.
- Focus on Puget Sound and Georgia Basin shared waters aquatic nuisance species management issues.
- Improve current management and monitoring of unauthorized and accidentally introduced non-native species.
- Provide education, public involvement and technical assistance.

## **Current status of the program**

Non-native aquatic nuisance plants and animals continue to threaten the diversity or abundance of native species, the ecological stability of infested waters, and the commercial, agricultural or recreational activities that depend on such waters. In 1998, the Department of Natural Resources reported that there are at least 52 non-native saltwater and estuarine species established in Puget Sound.

Some of these are nuisance species. *Spartina* cord grass, purple loosestrife and hydrilla are species that threaten waters in the Puget Sound basin. The state Noxious Weed Control Board classifies and regulates these as noxious weeds. In 2001, the Department of Agriculture reported 791 solid acres of *Spartina spp.* infested tidelands in Puget Sound, reduced from 892 solid acres in 1999. To protect Puget Sound, it is important to continue to control and eradicate these species.

European green crabs, Chinese mitten crabs and zebra mussels designated by the Department of Fish and Wildlife as harmful exotic species pose a threat to the Sound. Green crabs are established in Willapa and Grays Harbor and live specimens have also been discovered along the west coast of Vancouver Island. Zebra mussels that continue to cause millions of

dollars of damage and restoration costs in the Midwest have been discovered at points of entry to Washington State on vessels transported overland by commercial haulers. To date, monitoring programs have not detected zebra mussels in Puget Sound rivers or lakes.

Once established, aquatic nuisance species are very expensive to control and almost impossible to eradicate. Non-native species can enter waters of the Puget Sound basin in many ways, including accidental releases from research institutions and laboratories, aquaculture operations, the aquarium trades, discharge of ballast water from vessels, and the distribution of seafood commodities.

Managing aquatic nuisance species requires a two-pronged approach. The first defense is to prevent their introduction. The second is to contain and eliminate those that are already established to minimize ecological damage. Although existing programs cover many aspects of the prevention and control of aquatic nuisance species, there are a number of immediate needs to improve the management of nuisance species. These include the need to implement the state's ballast water management program, complete a study of ballast water treatment options, and classify and regulate non-native aquatic animals intended for introduction into Puget Sound basin.

Other tasks for the 2003-2005 biennium are to develop and implement a coordinated comprehensive aquatic nuisance species monitoring program, and to clearly define the roles and responsibilities of agencies, organizations and individuals in responding quickly and effectively to contain and eradicate newly identified aquatic nuisance species.

## **How the Aquatic Nuisance Species actions address work plan issues and priorities**

The Aquatic Nuisance Species program supports several of the issues and priorities identified in this work plan. Aquatic nuisance species pose a significant threat to the diversity of Puget Sound. On a nationwide basis, about 400 of the 958 species, or 42 percent of those listed as threatened or endangered under the Endangered Species Act, are considered to be at risk primarily because of competition with and predation by non-native species. Because of this risk, this work plan identifies aquatic nuisance species as

an ongoing priority to protect and restore Puget Sound's health.

Prevention, control and eradication of aquatic nuisance species is integral to the successful conservation and recovery of salmon and other species at risk, and to the protection and reestablishment of ecological processes and functions of marine and freshwater habitat.

The Aquatic Nuisance Species program also supports other key state programs that prevent, control and eradicate aquatic nuisance species in fresh or marine waters of the Puget Sound basin. Elements of the Department of Fish and Wildlife's Aquatic Nuisance Species Management Plan and the agency's European green crab monitoring program are funded through this work plan. Elements of the Department of Ecology's freshwater aquatic plant management program are also addressed in this work plan, although they are not funded under this work plan.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

### **How work plan actions support a larger effort**

The Puget Sound Aquatic Nuisance Species program is a partnership of federal, state and local efforts.

The U.S. Coast Guard oversees a voluntary program to encourage ballast water exchange in the open ocean from ships whose voyages originate outside of the exclusive economic zone (200 miles offshore). The Coast Guard program does not apply to vessels that ply their trade inside the exclusive economic zone.

Washington's ballast water management program is a critical complement of the Coast Guard program. Under this program, the Department of Fish and Wildlife regulates the ballast water discharges to state waters from vessels that operate within the exclusive economic zone. The department will implement treatment standards for ballast water discharged to state waters after July 2004. This work plan supports the Puget Sound component of the department's

statewide efforts to protect the region from green crab and other species, and to coordinate activities.

The Noxious Weed Control Board lists non-native noxious plants that adversely affect agricultural and natural areas and oversees the work of county noxious weed control boards to control the introduction and spread of these species. The Department of Agriculture maintains a plant quarantine list of species that may not be transported, bought or sold in the state.

The Department of Ecology reports on freshwater aquatic weed management program activities that are not funded under the work plan budget. Ecology administers a financial and technical assistance program to cities, counties, state agencies, tribes, and special purpose districts to eliminate noxious non-native aquatic plants in Washington's lakes and rivers. Actions funded under this work plan are designed to fill gaps in existing aquatic nuisance species programs by improving current management and monitoring practices.

### **Next steps beyond this biennium**

The key next step called for in the *Puget Sound Water Quality Management Plan* that was not proposed by the Department of Fish and Wildlife due to budget constraints and competing priorities is management of *Spartina spp.* control on Fish and Wildlife lands.

### **2003-2005 Budget Request for State Actions**

Proposed Enhancement	\$64,000
Total Proposed Funding	\$226,487

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>ANS-1     Aquatic Nuisance Species Management Programs</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Provide funding and technical assistance to state and local governments to reduce the introduction of freshwater invasive, exotic plants in state waters and to control/contain/eradicate existing noxious weed populations.	Four Puget Sound grants per year for the prevention and/or control of noxious aquatic weeds such as Eurasian water milfoil. Eradication of hydrilla in Pipe and Lucerne Lakes. Continuing hydrilla eradication program in King County. Initiation of European frogbit containment/eradication program in Snohomish County. Containing and preventing the spread of European frogbit from the private Snohomish County lake (where it is now growing) to other lakes in the State.	DOE-10	190
<b><u>ANS-2     Program Coordination</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Participate on the state ballast water groups.	Representation of Puget Sound and Georgia Basin interests on the work group. Identification of cost-effective ballast water treatment options and preparation of a report to the legislature.	PSAT-04	191
Participate on the state Aquatic Nuisance Species Coordinating Committee and executive committee.	Monthly executive committee meetings and two meetings annually of the state Aquatic Nuisance Species Coordinating Committee to coordinate programs and identify funding and legislative needs.	PSAT-04	192
<b><u>ANS-3     Management Improvements</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Continue to participate with and serve on various boards and committees addressing aquatic nuisance species and noxious and invasive plants and weeds. Update the Aquatic Plant Management Supplemental Environmental Impact Statement.	Implementation of the Aquatic Nuisance Species laws and regulations resulting in better understanding of avenues for nuisance species to enter the state and improved control mechanisms. Identification of invasive exotic aquatic plants and addition to the Washington State Noxious Weed List. New and better tools for the management of invasive exotic aquatic plants. More effective treatment and management of noxious invasive aquatic plants. NPDES permit oversight for the herbicide treatment of noxious weeds.	DOE-10	193
<b>PUGET SOUND ACTION TEAM</b>			
Participate on the Western Regional Panel of the national Aquatic Nuisance Species Task Force.	Representation of Puget Sound interests on the panel. Identification of coordination needs and projects with regional implications and the seeking of federal funds.	PSAT-04	194

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>ANS-4      Monitoring and Assessment</u></b>			
<b>DEPARTMENT OF FISH AND WILDLIFE</b>			
Implement and enforce the ballast water program, and the new Aquatic Nuisance Species law to classify and regulate nonnative species, designate infested water, prepare a rapid response plan and to inspect vessels on trailers entering the state for aquatic nuisance species. (Budget enhancement requested.)	Staff work group to evaluate alternative ballast water treatment options and environmental needs. Carry out a ballast water monitoring and sampling program. Develop and maintain a ballast water reporting data base and integrate it with U.S. Coast Guard's. Place informational signs at high use boat launches. Support the State Patrol's inspection program. Have a rapid response plan in place for species of concern. Convene Aquatic Nuisance Species Coordinating Committee meetings every six months, and distribute updated state Aquatic Nuisance Species management plan.	DFW-05	195
Continue monitoring for green crab in Puget Sound.	Coordinated volunteer monitoring for green crab at at least 80 sites in Puget Sound. Quick and decisive action to eliminate crabs where found.	DFW-05	196
<b>DEPARTMENT OF ECOLOGY</b>			
Conduct a survey of lakes and rivers with public access for invasive, exotic aquatic plants. Initiate research and investigate innovative techniques for managing aquatic weeds including presenting and publishing papers on activities to manage aquatic weeds.	Reports of new locations of aquatic nuisance species to the Washington Department of Fish and Wildlife so that the waterbodies can be declared infested and the information added to the state aquatic nuisance species database. Addition of new locations and species to an Ecology web database. Study on the fluridone treatment of Loomis Lake to start in 2002 and an ongoing study on Kress Lake. Paper published in a peer-reviewed journal. Reports of research results on innovative techniques for managing invasive and other aquatic weeds through published papers and presentations to peer groups.	DOE-10	197
<b>PUGET SOUND ACTION TEAM</b>			
Prepare an implementation plan for a multi-species Aquatic Nuisance Species monitoring program for Puget Sound in cooperation with the Tillamook and Lower Columbia River estuary programs.	An implementation plan for monitoring Aquatic Nuisance Species in Puget Sound.	PSAT-04	198
<b><u>ANS-5      Education and Technical Assistance</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
The Oil Spill Program will provide technical maritime and federal/international regulatory expertise as needed to the U.S. Fish and Wildlife Aquatic Nuisance Species ballast water subcommittee; the Navy's ballast water evaluation process; the Pacific ballast water coordination group and Canada's west coast regional working group. Vessel inspectors will disseminate educational materials and provide technical assistance to vessel operators.	Entities with the potential to introduce aquatic nuisance species to Washington waters will have current information about Washington State restrictions pertaining to ballast water exchange requirements. The introduction of aquatic nuisance species will be reduced.	DOE-10	199



STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
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**DEPARTMENT OF ECOLOGY**

Provide technical assistance and education on all aspects of aquatic plant management from identification, control methods, permitting, and funding.	Education of Washington residents via e-mail, telephone, speaking engagements, website, and disseminating educational materials. More native and less exotic aquatic plant use in ornamental aquatic gardens and aquariums. Maintain and update the Aquatic Weeds website. Produce a brochure about which native aquatic plants are suitable for ornamental ponds and a brochure about which native aquatic plants make suitable aquarium specimens.	DOE-10	200
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LOCAL GOVERNMENT ACTIONS	Action ID
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***SOUNDWIDE***

**ANS-1      Aquatic Nuisance Species Management Programs**

**THE PUGET SOUND ACTION TEAM RECOMMENDS THAT:**

<p>* Local governments support county noxious weed control boards in working with shoreline landowners and the public to control and eliminate Spartina and purple loosestrife on their land.</p>	<p>201</p>
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\* Promote public awareness of aquatic nuisance species through local government contacts with the community.

# **PUGET SOUND/GEORGIA BASIN SHARED WATERS**

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## ***Puget Sound Water Quality Management Plan Goal***

- To promote and coordinate efforts in Washington and British Columbia to ensure the protection, conservation and enhancement of the shared resources of the Puget Sound/Georgia Basin marine and estuarine ecosystem.

## **Strategies for achieving the goal**

- The Puget Sound/Georgia Basin International Task Force will coordinate and recommend policies and actions to protect the shared marine waters.
- Encourage cross-border partnerships.
- Measure progress through performance measures and adjust the program as needed.

## **Current status of the program**

Puget Sound, the Strait of Juan de Fuca and the Strait of Georgia are three parts of a single ecological unit—the inland marine waters of Washington and British Columbia. Many people refer to these waters as the Salish Sea. Fish, birds and other marine life pass freely through these shared waters. Human activities must be managed throughout the entire system to protect the shared resources. The Puget Sound/Georgia Basin Shared Waters program address this need through joint policy development, coordination of activities and exchanges of data and expertise.

The principal element of the program is the Puget Sound/Georgia Basin International Task Force. It was formed in 1993 under a 1992 environmental cooperation agreement signed by the governor of Washington and premier of British Columbia to address a wide range of shared environmental issues between the state of Washington and the province of British Columbia. As of spring 2002, task force membership from Washington includes several state and federal agencies, the Northwest Indian Fisheries Commission and the Northwest Straits Commission. British Columbia and Canada are represented by federal and provincial agencies and representatives of the Salish Sea Council.

The Puget Sound/Georgia Basin International Task Force works to protect the marine system through information exchanges, partnerships, and cooperative

policy review and recommendations. The task force has addressed protecting nearshore habitat, establishing marine protected areas, protecting marine plant and animal populations, minimizing the introduction of non-native species, monitoring, and other issues.

A number of partnerships have formed to work on Puget Sound/Georgia Basin issues. San Juan County and the Islands Trust have partnered to work on issues of mutual concern, including marine protected areas. The Puget Sound Action Team and the Puget Sound Council have partnered with the Fraser Basin Council to exchange information and expertise and to undertake joint projects. Environment Canada and the Environmental Protection Agency have also signed a Statement of Cooperation to work on Puget Sound/Georgia Basin issues. The Action Team and the Georgia Basin Ecosystem Initiative will co-sponsor a joint Georgia Basin/Puget Sound Research Conference in Vancouver, British Columbia in March 2003.

Past recommendations of the task force dealing with non-native species, marine protected areas and marine habitat protection have been adopted as elements of the *Puget Sound Water Quality Management Plan*. Actions to implement those recommendations appear elsewhere in this work plan.

## **How the Shared Waters actions address work plan issues and priorities**

The actions under this program focus on transboundary cooperation and coordination. Actions to implement task force recommendations appear in other programs in the work plan.

Transboundary research and coordination will support actions on contaminated sediments, protection and restoration of species at risk, protection of marine habitat, shellfish protection, control of aquatic nuisance species, monitoring, and education.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan

programs in a biennial report to the legislature in December 2004.

### **How work plan actions support a larger effort**

The transboundary activities under this program support and enhance many of our efforts to protect Puget Sound. In some cases, larger efforts have developed from studies and recommendations of the task force. In other cases, the task force provides a forum to compare efforts and techniques for programs. The contacts flowing from the task force result in exchanges of data and expertise on a wide range of issues.

The task force has been a catalyst for raising the issues of aquatic nuisance species and marine protected areas. Based in part on task force recommendations, active programs have been developed in Washington and British Columbia with close collaboration.

The task force has broadened our perspectives on monitoring, research and environmental indicators and resulted in broader information exchanges.

### **Next steps beyond this biennium**

The departments of Fish and Wildlife and Natural Resources did not propose an action for participation in the Puget Sound/Georgia Basin International Task Force. Since no budget is identified for this activity in prior work plans, they may continue to participate without proposing a separate action.

### **2003-2005 Budget Request for State Actions**

There is no separate state agency budget for work on this program. Actions to implement work group recommendations are included under other programs in this work plan.

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>PS/GB-1 Puget Sound/Georgia Basin International Task Force</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Participate on the Puget Sound/Georgia Basin International Task Force and its workgroups to improve coordination, communication and planning with British Columbia and enhance protection of the shared marine waters.	Development and implementation of recommendations with other Task Force and workgroup members. Participation in and assistance with the planning of a Puget Sound Research Conference. Attendance at meetings of the Task Force and its workgroups, as necessary.	DOE-03	205
<b>PUGET SOUND ACTION TEAM</b>			
Co-chair and participate in the Puget Sound/Georgia Basin International Task Force and its work groups. Host website, provide publications production and distribution. Represent Task Force to ECC and at other forums.	Task Force meetings twice annually. Publications distributed on demand.	PSAT-06	206



# SPILL PREVENTION AND RESPONSE

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## ***Puget Sound Water Quality Management Plan Goal***

- To enhance spill preparedness and response activities, while emphasizing spill prevention in Puget Sound and its tributaries, and to ensure that the spill prevention and response actions of state agencies are coordinated among themselves and with federal, local, tribal and private efforts.

## **Strategies for achieving the goal**

- Review and approve industry spill prevention and contingency plans.
- Update and revise the plans and policies for spill prevention and response.
- Seek improvements in vessel, liquid petroleum pipeline and oil facility safety.
- Provide education and technical assistance on spill prevention.

## **Current status of the program**

The Puget Sound economy demands large quantities of hazardous chemicals ranging from crude oil to ink, and from paint to pesticides. Spills of oil and hazardous chemicals can cause catastrophic damage to aquatic habitats. Tank vessels, barges, trucks, railcars and pipelines carry the largest volumes.

Washington state administers a program to prevent spills and, when necessary, to respond to spills. According to the Department of Ecology's 2001 annual report, more than 16 billion gallons of oil product move through the state of Washington. In 2001, the Department of Ecology recorded 16,050 gallons of oil spilled into surface waters of the state. This was higher than the 10,707 gallons reported in 2000. In 2001, the quantity of oil spilled from pipelines, tanks and tank trucks and other upland sources (9,394 gallons) exceeded that spilled from ships, barges and boats (6,656 gallons). An important factor in preventing oil spills was the positioning of a dedicated rescue tug at Neah Bay. Pipeline safety standards and inspections have been increased since the tragic gasoline spill and fire in Bellingham in 1999.

One problem faced by the Department of Ecology's spills program is the work load associated with

responding to illegal drug labs. These illegal drug production labs are very dangerous to residents and neighbors and must be properly cleaned up, and that effort has stretched Ecology's resources. Another challenge is securing permanent funding for the rescue tug at Neah Bay.

## **How the Spill Program actions address work plan issues and priorities**

Spill prevention and response was not listed as a priority for this work plan because of the recent success of the program in preventing large oil spills. History tells us this is partly luck. The current level of effort must be maintained to keep the risk of a large oil spill low. In addition, ongoing and permanent funding for a Neah Bay rescue tug is essential to continue to protect Puget Sound water quality and biological resources from a catastrophic oil spill. The tug has responded to 19 distressed vessels in the four winters it has been stationed in Neah Bay.

By supporting the rescue tug as a priority that helps to keep the risk of large oil spills low, this program does support the priorities of protecting marine habitats and species at risk.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

## **How work plan actions support a larger effort**

Only part of the funding for spill prevention and response is captured in the work plan budget. The departments of Ecology and Transportation and local governments use other resources to prevent and respond to spills, especially upland spills. Federal agencies, including the Coast Guard and the Federal Emergency Management Agency, local emergency response agencies and private industry work together to coordinate response drills. Several Marine Resource Committees in the Northwest Straits

Commission are reviewing local response plans to improve the coordination of early response activities.

### **Next steps beyond this biennium**

The actions in this work plan include all the key next steps called for in the *Puget Sound Water Quality Management Plan* .

### **2003-2005 Budget Request for State Actions**

Proposed Enhancement	\$2,800,000
Total Proposed Funding	\$5,074,942



STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>SP-1 Oil Spill Policy Implementation</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Implement the North Puget Sound Risk Management Plan. This plan was developed through a facilitated consensus decision-making process involving a diverse group of 20 stakeholders, co-chaired by Ecology and U.S. Coast Guard. The plan focuses on measures to prevent oil spills from marine vessels in the major transportation corridor from the entrance to the Strait of Juan de Fuca through the San Juan Islands.	With stakeholders and the Puget Sound Harbor Safety Committee, implement the 24 consensus recommendations in the North Puget Sound Panel Final Report in FY-03. Reduction in the frequency, magnitude and environmental consequences of major oil spills in the north Puget Sound area.	DOE-09	210
Continue to provide public education and technical outreach to the regulated community and stakeholders.	Spill prevention and response activities are well-coordinated with the public and operators of regulated vessels and facilities through a variety of mechanisms including: an actively maintained website; an oil spill advisory committee; publication of a newsletter, an annual report, Vessel Entries and Transits data, and prevention and safety advisory bulletins; and technical assistance during vessel inspections. Reduction in spill frequency.	DOE-09	211
Continue to inspect cargo, passenger and fishing vessels; oil tankers (shifting to a voluntary program); and marine fuel transfer operations (bunkering).	Approximately 450 vessel inspections conducted each year, helping reduce the size and frequency of vessel oil spills.	DOE-09	212
Continue to participate as a co-lead with the U.S. Coast Guard, the Environmental Protection Agency, Oregon, and Idaho in the Northwest Area Committee. The Committee and its work groups meet regularly to review and update the Northwest Area Contingency Plan, geographic response plans, related planning documents, and address other spill preparedness issues.	Continued lead role in the Northwest Area Committee and its work in updating the Northwest Area Contingency Plan, geographic response plans and related planning documents to help ensure that major oil and hazardous material incident response actions in the Northwest are rapid, effective and well-coordinated.	DOE-09	213
Continue to maintain around-the-clock spill response capability to oil spills and hazardous material incidents in Puget Sound from two regional offices. Under a new agreement, Ecology will also be responding to most oil spills under 1,000 gallons on behalf of the U.S. Coast Guard. This agreement is a direct result of the Coast Guard increasing their focus on homeland security.	Rapid, effective and well-coordinated responses to significant spills of oil and hazardous materials in inland and marine waters. Lessened impacts to the environment and economy from these incidents.	DOE-09	214

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>DEPARTMENT OF ECOLOGY</b>			
Continue to maintain a dedicated rescue tug at Neah Bay through state funding. Washington's outer coast and the western Strait of Juan de Fuca are the areas of highest risk for major and catastrophic oil spills. Major coastal spills also have the potential to heavily oil Puget Sound. Oil from a 1988 Grays Harbor spill reached waters east of Dungeness Spit. The tug will operate in the Strait of Juan de Fuca and along the Washington Coast as required. (Budget enhancement requested.)	Reduction in the frequency of vessel drift groundings from propulsion, steering, and other failures. Drift groundings and collisions are a major source of spills on the outer coast and western Strait of Juan de Fuca. The largest spills in state history have occurred in this area.	DOE-09	215
Continue to review, approve and oversee implementation of vessel, facility & pipeline oil spill contingency plans. Commercial marine vessels over 300 gross tons, 27 major oil handling facilities, and 3 oil pipelines in Puget Sound are required to submit plans.	Rapid, effective and well coordinated response to significant spills of oil spills by plan holders. Regulated entities include oil tankers, oil barges, container ships, passenger ships, very large commercial fishing vessels, grain and log ships, marine facilities that transfer oil in bulk, and regional oil transmission pipelines.	DOE-09	216
Continue to review and approve oil-spill prevention plans for the 30 major oil handling facilities and pipelines in Puget Sound. These are marine facilities that transfer oil in bulk to or from oil tankers and/or oil barges. Note: In 2000, the "Intertanko" US Supreme Court decision vacated Washington's statutory authority for the review and approval of tank vessel (oil tankers and barges) spill prevention plans. Since that time Ecology has instituted an award system for tank vessel operators that voluntarily comply with or exceed the requirements.	Reduction of the frequency, magnitude and environmental consequences of major oil spills from the 30 major Puget Sound oil handling facilities and pipelines.	DOE-09	217
Strengthen the relationship between Ecology and the U.S. Coast Guard by fully implementing the 2001 Memorandum of Agreement between Washington State and the U.S. Coast Guard.	Signed agreement on eight interagency protocols between Ecology and the U.S. Coast Guard in FY-03 addressing cooperative initiatives relating to: facility inspections, facility contingency plans, spill response drills, oversight of oil transfer operations, incident investigations, information sharing, media relations, and vessel inspections. Implementation of the protocols to maximize cooperation/coordination and minimize duplication of effort between the agencies.	DOE-09	218
<b>SP-4      <u>Spill Prevention Education</u></b>			
<b>UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM</b>			
Develop and distribute educational materials to boaters to encourage the use of best management practices, environmentally compatible maintenance and boat repair practices, and the safer handling and disposal of waste oil products. Promote recycling and more responsible boat refueling and bilge management to eliminate harmful discharges.	Educational materials, fact sheets, oil spill prevention education kits and other means addressing the consequences of and urgent need to prevent small chronic spills.	UW-02	219

## Spill Prevention and Response

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>UNIVERSITY OF WASHINGTON, WASHINGTON SEA GRANT PROGRAM</b>			
Coordinate oil spill prevention program activities with various industry and agency staff and organizations, such as the national Oceanic and Atmospheric Administration, U.S. Coast Guard, Department of Ecology, Northwest Marine Trade Association, Washington Public Ports Association, Pacific Coast Congress of Harbormasters, Pacific Oil Spill Prevention Education Team, States/BC Oil Spill Task Force and Puget Soundkeeper Alliance.	Better coordinated workshops and preparation and distribution of materials to ensure addressing a broader and more diverse audiences with a consistent message addressing small spills as a regional problem.	UW-02	220
Provide workshops and guidance to assist vessel and port operators to eliminate spill-prone operation and maintenance practices.	Audit of activities and application of best management practices by ports, marinas and commercial fishers to eliminate or alter operations that cause spills.	UW-02	221
Coordinate with boaters, marina and port operators, and commercial boating associations to identify the causes and sources of persistent small oil spills and develop educational strategies to eliminate these.	Continued reduction in small oil spills from port, marina and commercial boat operations.	UW-02	222



# MONITORING, RESEARCH AND LABORATORY SUPPORT

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## ***Puget Sound Water Quality Management Plan Goal***

- Assess the health of Puget Sound and its resources and communicate information to promote informed choices for the environmental management of Puget Sound.
- Establish and maintain a system of priorities and funding for research and dissemination of research findings.
- Assure the quality and timeliness of physical, chemical and biological laboratory testing.

## **Strategies for achieving the goals**

- Implement the Puget Sound Ambient Monitoring Program.
- Coordinate and fund research, maintain a list of priorities and help make research results available to decision-makers.
- Coordinate citizen monitoring.
- Review the capability of environmental laboratories to generate quality data and assure adequate laboratory support for sampling programs in agencies and other organizations, and develop and encourage the use of uniform guidelines for quality assurance.
- Develop and update protocols and guidelines to standardize the collection, analysis and transfer of data.

## **Current status of the program**

The monitoring, research and laboratory programs continue to support the generation of basic data and analyses needed by resource managers to make effective decisions about protecting Puget Sound.

The Puget Sound Ambient Monitoring Program (PSAMP) is a long-term effort to monitor and assess the condition of the Puget Sound ecosystem. Through PSAMP, federal, state and local agencies monitor marine and fresh waters, sediments, marine biological resources, nearshore habitat, and the effects of contaminants on fish. Every two years, the Action Team publishes *Puget Sound Update*, which summarizes the findings of the monitoring program and related studies. The Action Team released the 2002 edition in September 2002.

In the 2002-03 supplemental budget for Washington State, some PSAMP activities were eliminated or reduced through budget reductions. This particularly affects the status of the marine bird and mammal monitoring and to a lesser degree, the fish contaminant monitoring activities of PSAMP.

Updated Puget Sound protocols for station positioning were adopted in 2000. These and other Puget Sound protocols ensure the collection of high quality data that can be used by other scientists.

The research program has provided a regional focus to disseminate research findings since 1987. Research improves our understanding of Puget Sound and helps decision-makers evaluate options for protection.

The Puget Sound Action Team convened the fifth Puget Sound Research Conference in February 2001. The conference provided an opportunity for scientists, resource managers and citizens to hear about new scientific findings about the Puget Sound ecosystem. The Action Team published and disseminated the proceedings from the conference. The next conference will be in partnership with the Georgia Basin Ecosystem Initiative in March-April 2003 as the Georgia Basin/Puget Sound Research Conference. The co-sponsorship of this event will build cross-border scientific collaboration and coordination.

Since 1987, laboratories conducting analyses in Puget Sound are accredited by the Department of Ecology to ensure they can produce consistent data of a known quality. The agency audits these laboratories to maintain the highest possible standards of analysis and data reporting.

## **How the Monitoring, Research and Laboratory actions address work plan issues and priorities**

PSAMP is the core monitoring priority in the work plan. The long-term data and analyses from this program are essential to assessing the health of Puget Sound ecosystems and the effectiveness of management actions.

The monitoring actions of PSAMP contribute to the cleanup of contaminated sediments by providing ongoing data throughout Puget Sound. PSAMP also

performs specialized analyses of Department of Health monitoring data from commercial shellfish growing areas. This action contributes to shellfish protection by tracking trends in bacterial contamination and assists the evaluation of shellfish degradation that need increased protection efforts. Similarly, the PSAMP analysis of Health data contributes to the on-site sewage systems management issue by identifying potential on-site sewage system problems.

The Puget Sound Research Conference supports each of the work plan issues by providing a forum for scientific exchange and education across a wide range of topics.

A Puget Sound Action Team staff action to track the implementation and effectiveness of all programs in the work plan is included in the Estuary Management program. Action Team staff will report on the implementation and effectiveness of work plan programs in a biennial report to the legislature in December 2004.

### **How work plan actions support a larger effort**

Many entities, including tribal, federal, state and local governments, non-profit organizations and academic institutions, are engaged in projects that entail monitoring of Puget Sound resources, research and the use of accredited laboratory services. These efforts contribute to a variety of objectives that include meeting regulatory commitments, meeting needs of shoreline and growth management planning, resource protection, and basic and applied research.

PSAMP fills an important gap in these various activities in that it provides long-term, systematic monitoring data designed for Soundwide analysis. PSAMP also integrates monitoring from a diverse set of scientific disciplines, allowing for interdisciplinary, ecosystem-level analysis. A core principal of PSAMP is cross-agency coordination and includes the efforts of entities not funded by work plan actions. The King County Department of Natural Resources and Parks, the National Marine Fisheries Service and the U.S. Fish and Wildlife Service are all participants in PSAMP.

Citizen monitoring of shoreline and marine conditions supplements information developed by

federal, state, and local governments. Citizen monitoring can contribute valuable information to improve our understanding of Puget Sound.

Many agencies and institutions are engaged in applied research that contributes to short-term resource management as well as basic research intended to contribute to ecological understanding and long-term resource management. The majority of this work occurs outside of the work plan funded actions. However, the Puget Sound Research Conference (which will be the Georgia Basin/Puget Sound Research Conference in 2003) is a work plan action that serves the valuable purpose of providing a central forum for presentation and dissemination of scientific progress in the Puget Sound area.

### **Next steps beyond this biennium**

Several monitoring actions needed to fully maintain the PSAMP program as recommended by the Puget Sound Council are not proposed due to budget constraints and competing priorities. The Department of Fish and Wildlife does not propose to continue marine bird monitoring of summer seabirds; only winter bird surveys are proposed. Budget constraints also led to elimination of the marine mammal contaminant monitoring and the full analysis and reporting of the marine bird monitoring results. Fish and Wildlife proposed biennial sampling of fish contaminants rather than the annual monitoring that is conducted under the existing PSAMP program. In addition, PSAMP partners are not funded to prepare topic reports and diagnostic studies aimed at interdisciplinary understanding as a contribution to integrated resource management.

Other key next steps called for in the *Puget Sound Water Quality Management Plan* that have not been achieved and are not being proposed for funding due to budget constraints and competing priorities are a program for pesticide monitoring in Puget Sound and a citizens monitoring program.

### **2003-2005 Budget Request for State Actions**

Proposed Enhancements	\$300,000
Total Proposed Funding	\$7,075,449

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b><u>L-1      Laboratory Accreditation and Capacity</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Continue to operate laboratory accreditation program, supporting new accreditation applications and accreditation renewals for private, federal, tribal, and state laboratories. Ecology will integrate certification of laboratories that analyze drinking water samples into Ecology's lab accreditation program.	Accreditation of private, federal, tribal, and state laboratories according to established procedures and rules. Improved service to laboratories through "one-stop" accreditation services. Enhanced efficiency for up to 54 laboratories currently in two laboratory accreditation (validation) programs.	DOE-01	230
<b><u>L-2      Quality Assurance/Quality Control</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Provide quality assurance assistance to agency staff in the development and application of sound quality management principles. Develop or revise appropriate quality assurance and quality control procedures and documents. Review and comment on Quality Assurance Project Plans upon request.	Quality assurance technical assistance to help agency staff and others to develop better Quality Assurance/Quality Control plans resulting in collection of better (higher quality, more appropriate) data, more efficiently.	DOE-01	231
<b><u>M-0      Activities Reflecting Monitoring Program Goals and Objectives</u></b>			
<b>DEPARTMENT OF ECOLOGY</b>			
Participate on the Watershed Health Monitoring and Assessment Committee established under Substitute Senate Bill 5637. This is an interagency committee jointly chaired by the Salmon Recovery Funding Board and the Governor's Salmon Office. It intends to evaluate existing agency monitoring activities with an objective of developing a comprehensive watershed health monitoring program with a focus on salmon recovery.	Proposal for a coordinated, interagency, comprehensive monitoring system to evaluate and assess the health of watersheds statewide.	DOE-01	232
Develop chemical-specific action plans that will lead to the reduction and, where possible, elimination of persistent, bioaccumulative toxic (PBT) chemicals in the Puget Sound environment.	Action plans for some PBT chemicals identifying and encouraging specific activities for government agencies and business and citizen groups to reduce and eliminate PBTs in the Puget Sound environment. Proposal for a baseline monitoring program.	DOE-01	233
<b><u>M-1      Puget Sound Ambient Monitoring Program</u></b>			
<b>DEPARTMENT OF FISH AND WILDLIFE</b>			
Continue winter aerial surveys for marine birds and waterfowl. Update long-term monitoring database.	Continuous database for winter presence and distribution of marine birds and waterfowl. One or two basic reports per year.	DFW-01	234

## Monitoring, Research and Laboratory Support

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>DEPARTMENT OF FISH AND WILDLIFE</b>			
Monitor chemical contaminants in Puget Sound fish. Analyze spatial and temporal trends in contaminant levels and associated indicators. Develop biennial reports for each species monitored.	Annual update of contaminant database. Completed trend analyses. Written biennial report for each monitored species.	DFW-02	235
<b>DEPARTMENT OF NATURAL RESOURCES</b>			
Long-term monitoring program to track temporal trends in the extent of eelgrass in Puget Sound. This program will allow us to detect trends (changes) in critical habitat and link these changes to stressors which in turn, can be managed to preserve or restore habitats. This monitoring specifically concerns subtidal eelgrass and other vegetation types on all state-owned aquatic lands, and their status and trends are largely unknown. The current eelgrass sampling method is able to detect a 20 percent change over a ten-year period Puget Sound-wide. The proposed enhancement (\$140,000) will allow detection of trends within a shorter time interval and provide detection of trends of eelgrass abundance in each sub-basin of Puget Sound. (Budget enhancement requested)	Regional assessment of trends in marine vegetation distribution and abundance. Data and analysis provided in the form of maps, Geographic Information System coverages and documentation.	DNR-01	236
Inventory the floating kelp resources of Strait of Juan de Fuca and outer coast. Proposed enhancement (\$100,000) will expand coverage to include Puget Sound and San Juan Islands/Strait of Georgia. This inventory effort has been carried out since 1989 and constitutes one of the few long-term consistent monitoring of biological resources. (Budget enhancement requested)	Data and analysis will be provided in the form of maps, Geographic Information System coverages and documentation for kelp coverages for the years 2003 and 2004.	DNR-01	237
Coordinate operation and evaluation of the Puget Sound Ambient Monitoring Program (PSAMP)	PSAMP reports and other products delivered on time. Monitoring activities adapted as indicated by decisions from the program review. External recommendations obtained for program improvements. Participation in PSAMP Management Committee and Steering Committee.	DNR-01	238
Measure abundance and biodiversity in biotic communities throughout Puget Sound through the Spatial Classification and Landscape Extrapolation (SCALE) project. Use intertidal flora and fauna as a measure of ecosystem health. The results are used for regional comparisons, control-impact studies and long-term trends monitoring. Results will be critical in selecting salmonid protection and restoration sites and in monitoring their success, selection of mitigation sites and control/reference sites for mitigation and restoration monitoring, and ultimately in determining the effects on habitat function. The proposed enhancement (\$60,000) expands the scope to central Puget Sound and places the funding on a stable permanent basis. (Budget enhancement requested)	Data and analysis provided in the form of maps, GIS coverages and documentation.	DNR-01	239

## Monitoring, Research and Laboratory Support



STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>DEPARTMENT OF ECOLOGY</b>			
Build and enhance stream flow gauging capacity and provide technical and financial assistance for gauging to local entities in selected basins.	Stream flow gauging in up to four Puget Sound basins. Stream flow information posted to Ecology's website to be available for making short and long-term water management decisions.	DOE-01	240
Conduct special studies designed to answer key questions and evaluate environmental conditions at specific sites within Puget Sound.	Special studies designed and coordinated with other agencies to answer questions about key environmental variables (e.g. dissolved oxygen, chlorophyll concentration, salinity, fecal coliform bacteria, benthic community composition) through the Puget Sound Ambient Monitoring Program Steering Committee. Reports, conference presentations, and data from these studies.	DOE-01	241
Monthly sampling will be conducted at established marine water and freshwater monitoring stations. Annual sampling will be conducted at long-term and probability-based marine sediment quality monitoring stations. Monitoring results will provide baseline characterization of environmental conditions and trends in Puget Sound. Results of monitoring programs will be presented in annual or biennial reports. Data will be provided to support watershed planning, environmental indicators, 305(b), and 303(d) reports and the "Puget Sound Update."	Data management in long-term databases and access to data via Ecology's website. Presentation and interpretation of data results in annual and biennial reports, manuscripts, and conference presentations.	DOE-01	242
Work with the departments of Fish and Wildlife, Health, and Natural Resources; Action Team staff; King County Department of Natural Resources; U.S. Fish and Wildlife Service; and Environmental Protection Agency to coordinate operation and evaluation of the Puget Sound Ambient Monitoring Program (PSAMP).	Delivery of PSAMP reports and other products on time. Participation on PSAMP Steering Committee and Management Committee.	DOE-01	243
<b>DEPARTMENT OF HEALTH</b>			
Prepare an annual report that compiles data, interprets results, and recommends changes in the design of the monitoring program.	Submittal of annual PSAMP reports to the Action Team within established guidelines and timeframes that include results, interprets data, and examines design of monitoring program.	DOH-01	244
Monitor shellfish growing areas for fecal coliform bacteria and identify trends and potential impacts to public health.	An annual report documenting the findings of fecal coliform monitoring, the level of fecal contamination in Puget Sound shellfish growing areas, and identifying trends.	DOH-01	245

## Monitoring, Research and Laboratory Support

STATE AGENCY ACTIONS	OUTPUTS	Budget Code	Action ID
<b>DEPARTMENT OF HEALTH</b>			
Monitor shellfish for paralytic shellfish poisoning (PSP) to describe temporal and spatial patterns and potential impacts to public health.	An annual report documenting findings of PSP monitoring and describing temporal and spatial patterns in shellfish growing areas in Puget Sound.	DOH-01	246
Work with the state departments of Ecology, Fish and Wildlife, and Natural Resources, Action Team staff, the King County Department of Natural Resources, U.S. Fish and Wildlife Service, and U.S. Environmental Protection Agency to coordinate operation and evaluation of the Puget Sound Ambient Monitoring Program (PSAMP).	Coordinated monitoring activities and the development of an integrated, comprehensive monitoring strategy.	DOH-01	247
Coordinate data management through a computerized system and ensure that data meets requirements for quality assurance. Continue development of the integrated data system using Geographic Information System technology as funding allows.	Addition of new database components as funding allows.	DOH-01	248
<b>PUGET SOUND ACTION TEAM</b>			
Coordinate and communicate about the findings of the Puget Sound Ambient Monitoring Program and other scientific studies of Puget Sound.	Distribution of findings in the Puget Sound Update report in 2004.	PSAT-02	249
Inform the public about the condition and health of Puget Sound as measured by the Action Team's environmental indicators.	Distribution of 500,000 copies of the Puget Sound's Health 2004 report. A communications strategy to publicly announce and report findings of report, including direct contact with the public and media.	PSAT-02	250
<b><u>M-2</u>      <u>Citizen's Monitoring</u></b>			
<b>DEPARTMENT OF HEALTH</b>			
Continue to involve volunteers and citizen monitoring groups in PSAMP activities.	Recruitment and training of volunteers to collect samples for biotoxin monitoring. Contract with the Puget Sound Restoration Fund to organize volunteer collection efforts.	DOH-01	251
<b><u>R-1</u>      <u>Puget Sound Research Program</u></b>			
<b>PUGET SOUND ACTION TEAM</b>			
Plan, coordinate, promote and convene the 2005 Puget Sound Research Conference.	The 2005 Puget Sound Research Conference will include at least 500 participants and attendees.	PSAT-02	252

## Monitoring, Research and Laboratory Support

# BUDGET FOR THE 2003-2005 PUGET SOUND WATER QUALITY WORK PLAN

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**TABLE 2: Proposed Budget by Agency**

Table 2 on the following pages presents the budget proposed by state agencies for implementing the 2003-2005 Puget Sound Water Quality Work Plan.

Key to Table 2																											
<p><b>Budget Code:</b> Funding under each budget code supports one or more related actions in the work plan. Each action in the work plan that is supported with state funding is referenced to a budget code.</p> <p><b>Title:</b> Short description of the budget category.</p> <p><b>Continuing 2001-2003 Proviso Funds:</b> Funds designated as a proviso by the legislature to implement the Puget Sound work plan during the 2001-2003 biennium. The amounts shown reflect the changes adopted by the legislature in the 2002 supplemental budget.</p> <p><b>Other continuing funding:</b> Non-proviso funds that agencies are voluntarily reporting on to the Action Team so that Puget Sound benefits can be tracked.</p> <p><b>Proposed Adjustments for 2003-2005:</b> Increases, reductions or changes in funding proposed by state agencies for the 2003-2005 biennium.</p> <p><b>Total:</b> The total amount of funds proposed as continuing provisos, continuing non-proviso funds, or adjustments to provisos for 2003-2005 for each budget code.</p> <p><b>Fund:</b> The source of the funds.</p>	<p><b>Fund Source Acronyms:</b></p> <table> <tr><td><b>GF-S</b></td><td>General Fund-State</td></tr> <tr><td><b>GF-F</b></td><td>General Fund-Federal</td></tr> <tr><td><b>GF-F Capital</b></td><td>General Fund-Federal</td></tr> <tr><td><b>ALEA</b></td><td>Aquatic Lands Enhancement Account</td></tr> <tr><td><b>WQPF</b></td><td>Water Quality Permit Fees</td></tr> <tr><td><b>MVF</b></td><td>Motor Vehicle Fund</td></tr> <tr><td><b>STCA</b></td><td>State Toxic Control Account</td></tr> <tr><td><b>OSPA</b></td><td>Oil Spill Prevention Account</td></tr> <tr><td><b>OSRA</b></td><td>Oil Spill Response Account</td></tr> <tr><td><b>WQA</b></td><td>Water Quality Account</td></tr> <tr><td><b>FAWA</b></td><td>Freshwater Aquatic Weed Account</td></tr> <tr><td><b>WQA-Capital</b></td><td>Water Quality Account-Capital</td></tr> <tr><td><b>SDPA</b></td><td>State Drought Preparedness Account</td></tr> </table>	<b>GF-S</b>	General Fund-State	<b>GF-F</b>	General Fund-Federal	<b>GF-F Capital</b>	General Fund-Federal	<b>ALEA</b>	Aquatic Lands Enhancement Account	<b>WQPF</b>	Water Quality Permit Fees	<b>MVF</b>	Motor Vehicle Fund	<b>STCA</b>	State Toxic Control Account	<b>OSPA</b>	Oil Spill Prevention Account	<b>OSRA</b>	Oil Spill Response Account	<b>WQA</b>	Water Quality Account	<b>FAWA</b>	Freshwater Aquatic Weed Account	<b>WQA-Capital</b>	Water Quality Account-Capital	<b>SDPA</b>	State Drought Preparedness Account
<b>GF-S</b>	General Fund-State																										
<b>GF-F</b>	General Fund-Federal																										
<b>GF-F Capital</b>	General Fund-Federal																										
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**Table 2. Detailed Budget by Agency for the 2003-2005 Puget Sound Water Quality Work Plan**

Budget Code	Title	Continuing Proviso Work Plan Funding	Other Continuing Funding	Proposed Adjustments	Total	Fund
<b>DEPARTMENT OF AGRICULTURE</b>						
WSDA-01	Watershed Technical Assistance	\$74,500			\$74,500	GF-S
Total	Department of Agriculture	\$74,500			\$74,500	GF-S
<b>DEPARTMENT OF COMMUNITY, TRADE AND ECONOMIC DEVELOPMENT</b>						
CTED-01	Technical Assistance	\$123,000			\$123,000	GF-S
Total	Office of Community Development	\$123,000			\$123,000	GF-S
<b>CONSERVATION COMMISSION</b>						
CC-01	Technical assistance and funding for Puget Sound Conservation Districts for their water quality projects	\$494,000		\$150,000	\$644,000	GF-S
		\$840,000			\$840,000	WQA Capital
Total	Conservation Commission	\$1,334,000		\$150,000	\$1,484,000	
<b>DEPARTMENT OF ECOLOGY</b>						
DOE-01	Ambient monitoring and laboratory certification	\$3,181,887			\$3,181,887	GF-S
		\$217,830			\$217,830	WQA
		\$322,976			\$322,976	SDPA
		\$99,194			\$99,194	SRA
		\$244,000			\$244,000	GF-F
DOE-02	Waste water discharge permits	\$77,968			\$77,968	GF-S
		\$3,748,220			\$3,748,220	WQPF
DOE-03	Watershed assistance (Non-proviso watershed grants)		\$2,873,000		\$2,873,000	WQA
DOE-04	Nonpoint source pollution	\$858,767			\$858,767	GS-S
DOE-05	Shellfish protection	\$111,383			\$111,383	GF-S
DOE-06	Stormwater program	\$311,697			\$311,697	GF-S
		\$1,400,000			\$1,400,000	STCA
DOE-07	Contaminated sediments and dredging	\$1,181,000			\$1,181,000	STCA
		\$9,000			\$9,000	GF-F
DOE-08	Wetland protection and restoration	\$874,691			\$874,691	GF-S
		\$141,000			\$141,000	GF-F
DOE-09	Oil spills prevention and response	\$2,104,942			\$2,104,942	OSAA
				\$2,800,000	\$2,800,000	OSRA
DOE-10	Aquatic Nuisance Species		\$48,000		\$48,000	FAWA
Subtotal	Department of Ecology	\$5,416,393			\$5,416,393	GF-S
Subtotal	Department of Ecology	\$394,000			\$394,000	GF-F
Subtotal	Department of Ecology	\$2,104,942			\$2,104,942	OSPA
Subtotal	Department of Ecology	\$217,830	\$2,873,000		\$3,090,830	WQA
Subtotal	Department of Ecology		\$48,000		\$48,000	FAWA
Subtotal	Department of Ecology	\$2,581,000			\$2,581,000	STCA
Subtotal	Department of Ecology	\$322,976			\$322,976	SDPA
Subtotal	Department of Ecology			\$2,800,000	\$2,800,000	OSRA
Subtotal	Department of Ecology	\$99,194			\$99,194	SRA
Subtotal	Department of Ecology	\$3,748,220			\$3,748,220	WQPF

**Table 2. Detailed Budget by Agency for the 2003-2005 Puget Sound Water Quality Work Plan**

Budget Code	Title	Continuing Proviso Work Plan Funding	Other Continuing Funding	Proposed Adjustments	Total	Fund
Total	Department of Ecology	\$14,884,555	\$2,921,000	\$2,800,000	\$20,605,555	
<b>DEPARTMENT OF FISH AND WILDLIFE</b>						
DFW-01	Marine bird and mammal monitoring (Cut \$265,000 by the 2002 supplemental budget)	\$172,752			\$172,752	GF-S
DFW-02	Fish contaminant monitoring (Cut \$113,000 by the 2002 supplemental budget)	\$728,810			\$728,810	GF-S
DFW-03	Soundwide technical assistance for water quality and habitat	\$314,838			\$314,838	GF-S
DFW-04	Local Area technical assistance for water quality and habitat	\$650,119			\$650,119	GF-S
DFW-05	Aquatic nuisance species and ballast water program (cut \$49,000 by the 2002 supplemental budget)	\$162,487		\$64,000	\$226,487	GF-S
DFW-06	Management & recovery plans for ground & forage fish, establish marine protected areas (Cut \$66,000 by 2002 supplemental budget)	\$682,421		\$358,000	\$1,040,421	GF-S
Total	Department of Fish and Wildlife	\$2,711,427		\$422,000	\$3,133,427	GF-S
<b>DEPARTMENT OF HEALTH</b>						
DOH-01	Monitoring, data management and reporting	\$472,632			\$472,632	GF-S
DOH-02	Protection and restoration of shellfish beds	\$936,300			\$936,300	GF-S
DOH-03	Recreational shellfish program	\$676,000			\$676,000	GF-S
DOH-04	On-site sewage management	\$1,284,270			\$1,284,270	GF-S
Total	Department of Health	\$3,369,202			\$3,369,202	GF-S
<b>DEPARTMENT OF NATURAL RESOURCES</b>						
DNR-01	Nearshore habitat monitoring	\$853,650		\$300,000	\$1,153,650	ALEA
DNR-02	Management of wetlands	\$36,000			\$36,000	GF-S
DNR-03	Puget Sound Dredged Disposal Analysis	(No work plan funding proposed.)				
DNR-04	Multi-user disposal site program	\$153,300			\$153,300	ALEA
Subtotal	Department of Natural Resources	\$1,006,950		\$300,000	\$1,306,950	ALEA
Subtotal	Department of Natural Resources	\$36,000			\$36,000	GF-S
Total	Department of Natural Resources	\$1,042,950		\$300,000	\$1,342,950	

**Table 2. Detailed Budget by Agency for the 2003-2005 Puget Sound Water Quality Work Plan**

Budget Code	Title	Continuing Proviso Work Plan Funding	Other Continuing Funding	Proposed Adjustments	Total	Fund
<b>STATE PARKS AND RECREATION COMMISSION</b>						
PRC-01	Marina and Boater Grants Program		\$450,000		\$450,000	GF-F Capital
PRC-02	Environmental education for boaters	\$191,000			\$191,000	ALEA
			\$75,000		\$75,000	GF-F
Subtotal	State Parks and Recreation Commission	\$191,000			\$191,000	ALEA
Subtotal	State Parks and Recreation Commission		\$75,000		\$75,000	GF-F
Subtotal	State Parks and Recreation Commission		\$450,000		\$450,000	GF-F Capital
Total	State Parks and Recreation Commission	\$191,000	\$525,000		\$716,000	
<b>DEPARTMENT OF TRANSPORTATION **</b>						
DOT-01	Stormwater		\$2,917,000		\$2,917,000	MVF, Fed
DOT-02	Contaminated Sediments		\$1,300,000		\$1,300,000	MVF, Fed
DOT-03	Wetlands **					
DOT-04	Habitat **					
Total	Department of Transportation		\$4,217,000		\$4,217,000	
** The Department of Transportation anticipates spending \$5,401,850 for stormwater, wetlands and habitat mitigation for construction projects.						
<b>UNIVERSITY OF WASHINGTON</b>						
UW-01	Water quality agents	\$300,000			\$300,000	GF-S
UW-02	Oil spill prevention education (Ecology pass through)	\$170,000			\$170,000	OSAA
Total	University of Washington	\$470,000			\$470,000	
<b>WASHINGTON STATE UNIVERSITY</b>						
WSU-01	Water quality agents	\$331,000			\$391,000	GF-S
	Bring funding up to actual cost.			\$60,000		GF-S
Total	Washington State University	\$331,000		\$60,000	\$391,000	GF-S

**Table 2. Detailed Budget by Agency for the 2003-2005 Puget Sound Water Quality Work Plan**

Budget Code	Title	Continuing Proviso Work Plan Funding	Other Continuing Funding	Proposed Adjustments	Total	Fund
<b>PUGET SOUND WATER QUALITY ACTION TEAM</b>						
PSAT-01	Work plan and management plan	\$650,616			\$650,616	WQA
		\$208,338			\$208,338	GF-F
PSAT-02	Puget Sound ambient monitoring and research	\$367,507			\$367,507	WQA
		\$114,211			\$114,211	GF-F
PSAT-03	Regional technical assistance	\$1,013,445			\$1,013,445	WQA
		\$408,084			\$408,084	GF-F
PSAT-04	Technical programs	\$687,163			\$687,163	WQA
		\$212,111			\$212,111	GF-F
PSAT-05	Public information, education and involvement actions	\$558,269			\$558,269	WQA
		\$188,256			\$188,256	GF-F
	Public Involvement and Education (PIE) Fund	\$700,000			\$700,000	WQA
Subtotal	Puget Sound Water Quality Action Team	\$1,131,000			\$1,131,000	GF-F
Subtotal	Puget Sound Water Quality Action Team	\$3,977,000			\$3,977,000	WQA
Total	Puget Sound Water Quality Action Team	\$5,108,000			\$5,108,000	
Subtotal	All Agencies GF-S	\$12,855,522		\$632,000	\$13,487,522	
Subtotal	All Agencies GF-F	\$1,525,000	\$75,000		\$1,600,000	
Subtotal	All Agencies GF-F Capital		\$450,000		\$450,000	
Subtotal	All Agencies ALEA	\$1,197,950		\$300,000	\$1,497,950	
Subtotal	All Agencies WQPF	\$3,748,220			\$3,748,220	
Subtotal	All Agencies MVF and Federal		\$4,217,000		\$4,217,000	
Subtotal	All Agencies STCA	\$2,581,000			\$2,581,000	
Subtotal	All Agencies OSAA	\$2,274,942			\$2,274,942	
Subtotal	All Agencies WQA	\$4,194,830	\$2,873,000		\$7,067,830	
Subtotal	All Agencies FAWA		\$48,000		\$48,000	
Subtotal	All Agencies SRA	\$99,194			\$99,194	
Subtotal	All Agencies SDPA	\$322,976			\$322,976	
Subtotal	All Agencies OSRA (Ecology's request to fund the emergency tug.			\$2,800,000	\$2,800,000	
Subtotal	All Agencies WQA Capital	\$840,000			\$840,000	
<b>Total</b>	<b>All Agencies Operating Funds</b>	<b>\$28,799,634</b>	<b>\$2,996,000</b>	<b>\$3,732,000</b>	<b>\$35,527,634</b>	
<b>Total</b>	<b>All Agencies Capital Funds</b>	<b>\$840,000</b>	<b>\$450,000</b>		<b>\$1,290,000</b>	
<b>Grand Total</b>	<b>All Agencies. All Funds</b>	<b>\$29,639,634</b>	<b>\$7,663,000</b>	<b>\$3,732,000</b>	<b>\$41,034,634</b>	



**Table 3. 2003-2005 Biennium Budget, by Program**

	Operating or Capital Budget	Continuing Proviso Management Plan Funding	Other Continuing Funding	Proposed Enhancements	Total
Puget Sound Estuary Management	Operating	\$1,758,228			\$1,758,228
Marine and Freshwater Habitat Protection * **	Operating	\$2,699,069		\$358,000	\$3,057,069
Shellfish Protection	Operating	\$1,723,683			\$1,723,683
Stormwater and Combined Sewer Overflows **	Operating	\$1,834,697	\$2,917,000		\$4,751,697
Municipal and Industrial Discharges	Operating	\$3,826,188			\$3,826,188
Contaminated Sediments and Dredging	Operating	\$1,343,300	\$1,300,000		\$2,643,300
Nonpoint Source Pollution Program	Operating	\$858,767			\$858,767
On-site Sewage Systems	Operating	\$1,284,270			\$1,284,270
Local Watershed Action	Operating		\$2,873,000		\$2,873,000
Agricultural Practices	Operating	\$568,500		\$150,000	\$718,500
	Capital	\$840,000			\$840,000
	Total	\$1,408,500		\$150,000	\$1,558,500
Marinas and Recreational Boating	Operating	\$191,000	\$75,000		\$266,000
	Capital		\$450,000		\$450,000
	Total	\$191,000	\$525,000		\$716,000
Education and Public Involvement	Operating	\$3,499,054		\$60,000	\$3,559,054
Aquatic Nuisance Species *	Operating	\$162,487	\$48,000	\$64,000	\$274,487
Puget Sound/Georgia Basin Shared Waters	Operating				
Spill Prevention and Response	Operating	\$2,274,942		\$2,800,000	\$5,074,942
Monitoring, Research and Laboratory Support *	Operating	\$6,775,449		\$300,000	\$7,075,449
All Programs Operating	Operating	\$28,799,634	\$7,213,000	\$3,732,000	\$39,744,634
All Programs Capital		\$840,000	\$450,000		\$1,290,000
<b>TOTAL All Programs</b>		<b>\$29,639,634</b>	<b>\$7,663,000</b>	<b>\$3,732,000</b>	<b>\$41,034,634</b>

\* WDFW provisoed funding for these programs was reduced by \$493,000 by the 2002 supplemental operating budget.

\*\* The Department of Transportation anticipates spending \$5,401,850 for stormwater, wetlands and habitat mitigation for construction projects.

**Table 4. Proposed Budget Enhancements by Fund Source and Agency**

At the request of the Puget Sound Action Team, state agencies have proposed the following budget enhancements to better carry out the Puget Sound management plan in the 2003-2005 biennium. The Action Team recognizes that the state is facing a budget shortfall for the 2003-2005 biennium and that state environmental programs may be cut in the 2003-2005 budget. These proposals are offered in case additional funding becomes available. The proposals are listed by the proposed funding source. The Action Team has ranked the proposals for each funding source in priority order. No overall ranking was done.

Rank	Agency	Budget Code	Proposed Action	Budget Enhancements
<b>Oil Spill Prevention Account</b>				
1	Ecology	DOE-09	<b>Oil spills prevention and response</b> —Continue to maintain a dedicated rescue tug at Neah Bay through state funding. Washington's outer coast and the western Strait of Juan de Fuca are the areas of highest risk for major and catastrophic oil spills. Major coastal spills also have the potential to heavily oil Puget Sound. Oil from a 1988 Grays Harbor spill reached waters east of Dungeness Spit. The tug will operate in the Strait of Juan de Fuca and along the Washington coast.	\$2,800,000
<b>State General Funds</b>				
1	Washington State University	WSU-01	<b>Water Quality Agents</b> —Water Quality Agents provide technical assistance and outreach to communities on Puget Sound issues. Equal amounts of funding support two field agent positions with the University of Washington Sea Grant program and three positions with WSU Cooperative Extension. The budget for WSU does not adequately cover operating expenses for the program and has not kept pace with cost of living increases.	\$60,000
2	Conservation Commission	CC-01	<b>Technical assistance and funding for Puget Sound Conservation Districts for their water quality projects</b> —Funding to support engineering services for Puget Sound conservation districts for stream restoration and water quality projects with landowners and local governments. Restores funding cut in 2002 supplemental budget that reduces on-the-ground project support.	\$150,000
3	Fish and Wildlife	DFW-06	<b>Management and recovery plans for ground and forage fish, establish marine protected areas</b> —Collect information on the status of ground fish and forage fish. Add a synoptic trawl survey once per biennium to smooth inter-annual variation of stock survey data. Seek consensus with tribes and other parties on management plans for recovery of depressed ground fish and forage fish stocks, one tool of which may include marine protected areas. Provide technical assistance to Marine Resources Committees to enhance protection of fish stocks.	\$358,400
4	Fish and Wildlife	DFW-05	<b>Classify and regulate nonnative species and implement and enforce the state's ballast water program</b> —Staff a work group to evaluate alternative ballast water treatment options and environmental needs. Carry out a ballast water monitoring	\$64,000

**Table 4. Proposed Budget Enhancements by Fund Source and Agency**

Rank	Agency	Budget Code	Proposed Action	Budget Enhancements
			and sampling program. Develop and maintain a ballast water-reporting database and integrate it with the US Coast Guard system. Place informational signs at high use boat launches. Support the state Patrol's vessel inspection program. Have a rapid response plan in place for species of concern and convene the state Aquatic Nuisance Species Coordinating Committee.	
<b>Enhancements Requested for State General Funds —TOTAL</b>				<b>\$572,400</b>
<b>Aquatic Lands Enhancement Funds</b>				
1	Natural Resources	DNR-01	<b>Nearshore habitat monitoring</b> —Long-term monitoring program to track temporal trends in the extent of eelgrass in Puget Sound. This program will allow the state to detect trends (changes) in critical habitat and link these changes to stressors, which in turn, can be managed to preserve or restore habitats. This monitoring specifically concerns subtidal eelgrass and other vegetation types on all state-owned aquatic lands, and their status and trends are largely unknown. The current eelgrass sampling method is able to detect a 20% change over a 10 year period Puget Sound-wide. The proposed enhancement will allow detection of trends within a shorter time interval and provide detection of trends of eelgrass abundance in each sub-basin of Puget Sound.	\$140,000
2	Natural Resources	DNR-01	<b>Nearshore habitat monitoring</b> —Inventory the floating kelp resources of Strait of Juan de Fuca and outer coast. Proposed enhancement will expand coverage to include Puget Sound and San Juan Islands/Strait of Georgia. This inventory effort has been carried out since 1989 and constitutes one of the few long-term consistent monitoring of biological resources.	\$100,000
3	Natural Resources	DNR-01	<b>Nearshore habitat monitoring</b> —Measure abundance and biodiversity in biotic communities throughout Puget Sound through the Spatial Classification and Landscape Extrapolation (SCALE) project. Use intertidal flora and fauna as a measure of ecosystem health. The results are used for regional comparisons, control-impact studies and long-term trends monitoring. Results will be critical in selecting salmonid protection and restoration sites and in monitoring their success, selection of mitigation sites and control/reference sites for mitigation and restoration monitoring, and ultimately in determining the effects on habitat function. The proposed enhancement expands the scope to central Puget Sound and places the funding on a stable permanent basis.	\$60,000
<b>Enhancements Requested for Aquatic Lands Enhancement Funds —TOTAL</b>				<b>\$300,000</b>
<b>Total Requests from All Funds Sources</b>				<b>\$3,732,000</b>



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